Our Ocean Backyard — *Santa Cruz Sentinel* columns by Gary Griggs, Director, Institute of Marine Sciences, UC Santa Cruz.

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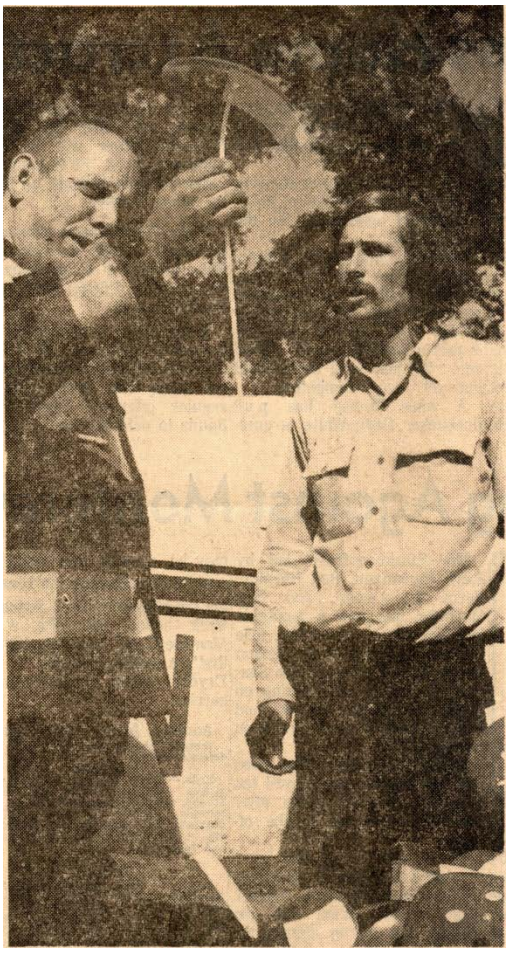
Aerial adventures continue



Drifter, pilot and scientist ready for an aerial drifter drop.

Studying local ocean currents 40 years ago by dropping drifters from a small plane every month for a year and a half turned out to be a regular adventure. It was important to know which way the nearshore waters moved throughout the year, although the value of the information wouldn't become clear for some years to come. I'll get to that in my next column, but as a young scientist trying to start a coastal research project, there were more mishaps ahead. The process of doing research is often more interesting than the results.

After surviving the first emergency, the janitor turned pilot said he had a solution to avoid getting the bundles of current drifters caught on the tail of the plane. An experienced pilot can adjust the controls of the plane so that it flies in a skid, called a crab. This is one way of landing a plane in a strong crosswind.

The pilot was proposing to fly the plane in a skid, with the tail off to one side so the drifters didn't get stuck on the tail. Not knowing much about flying, I said sure. Let's go for it. Had I known that this wasn't particularly safe, I might have said something else.

The approach I worked out for dropping the drifters was to fly at a known speed, usually about 80-90 miles per hour, and use a stop watch to determine when we were ½ mile, 1 mile, 1 ½ miles, 2 miles and 3 miles offshore, our established offshore drop points.

To manage the drop each month required an assistant, who sat in the back of the plane and handed me the pre-marked bundles of drifters. I would then open the door and drop these at the appropriate times to hit our targets. I had a younger brother who was a UCSC student at the time, and he was usually willing to go along. But, depending upon the day and time, I grabbed whomever I could find who wanted to go flying.

We actually did drop the drifters while skidding the plane for a while without any major incidents, until about our sixth month. Back in the early 1970's, Scotts Valley had a small airport, right alongside Mt. Hermon Road directly in front of what is now the King's Village Shopping Center. There were two hazards for pilots to contend with at Scotts Valley, one when landing and the other when taking off. Next to the landing strip was a propane gas company lot with lots of large tanks full of flammable gas. Having this adjacent to the runway always seemed like a bad combination. Taking off to the west, there was a ridge directly in the flight path so you had to climb quickly to avoid becoming a statistic.

About month six I grabbed a student who had been working for me getting the drifters ready to launch each month. He was excited about flying so agreed to come along. He was a very large guy, probably weighing 250 pounds or so. The pilot was also a large man, although I didn't think too much about their combined mass until we had just taken off.

In less than 30 seconds a flashing red light came on, which was the stall light indicating the plane was climbing too quickly for the load. With a mountain side

directly in front of us and a flashing red light in my face, I again had that fatal feeling that we were in deep trouble and that maybe I should have used the boat after all. Being seasick for a two days every month all of a sudden sounded better than dying in a plane crash.

By banking right and heading up Lockhart Gulch, he was able to avoid colliding with the low ridge in front of us. He reduced the rate of climb enough to keep the stall light off, and we slowly gained enough elevation to just clear the ridge top without hitting any trees.

The rest of that flight went off more or less as planned although I was still uneasy about the skid approach. I talked to my brother about my concerns and he told me his neighbor was an airline pilot and might be worth talking to. I met Rich, the next weekend and explained the coastal current study, our several near disasters, and then the crab solution. I recall his eyebrows going up, and with astonishment saying – You're doing what?

He explained that this was not a safe maneuver under any conditions, particularly with the plane door open, flying at low elevations right above the water with strong winds. He had his own plane, which had a V-shaped tail that would avoid the drifter release problems, and also had more power than the rental plane we were using.

The only real challenge was that his plane had only one door, and that was on the pilot's side. I couldn't very well ask him to open his door and drop the drifters while he was also trying to fly the plane. The window on the passenger side was hinged but only opened a few inches. But Rich and I were able to take a pin out of the latch system so it could swing freely upward and I could get the drifters out. Opening the window at 80 or 90 mph meant that there was a lot of lift on the window, however, so we attached a leash to hold it down between drops.

The stage was set for our next near disaster. The assistant in the back seat had to hold the leash tightly to keep control of the window while I was using both hands to drop the drifters. On one of our first flights, my helper on the flight accidentally let go of the leash, the window swung loose and began hammering the top of the plane. This not only made a lot of noise, but was of considerable concern to the pilot. I remember him yelling- WHAT'S THAT?… followed by GRAB THE WINDOW! So three miles off Moss Landing, I had to reach the upper half of my body out of the plane and grab the loose window, which was still slamming against the roof of the plane, and hold it down until he could make an emergency landing.

I again had to wonder if there might be a safer way to find out which way our coastal currents were going.