

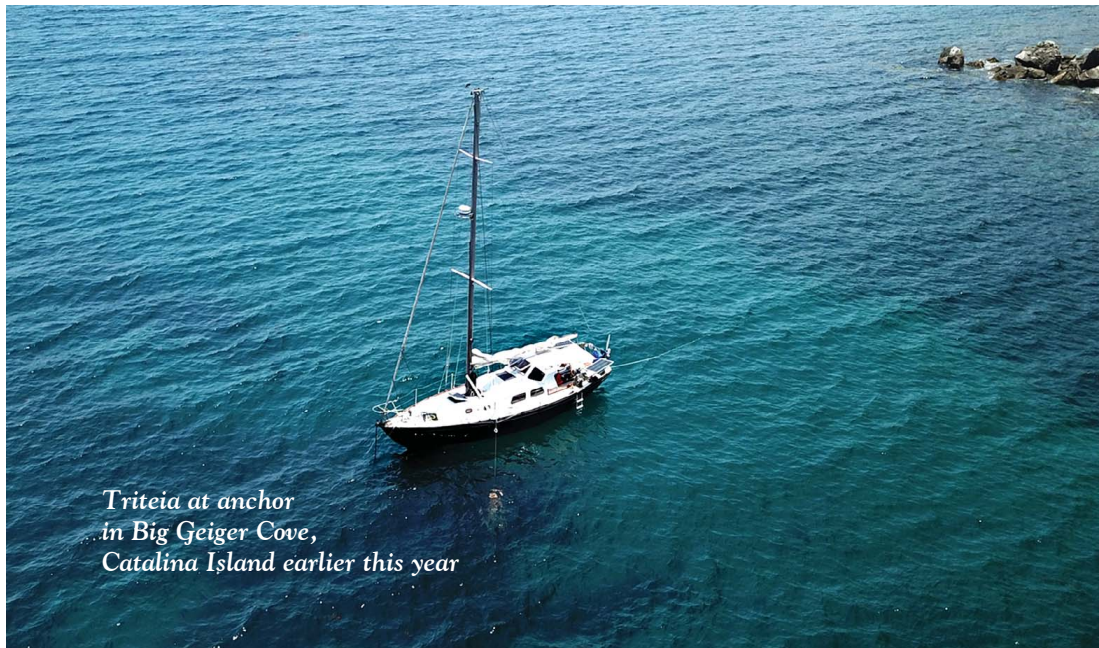
# 1000 MILES STEERED BY DROGUE

## James Frederick

SV *Triteia* is a 1965 Alberg 30. I found her in a marina in Los Angeles harbour where boats go to die. She had not left the slip in 6 years, had a seized engine and was bare but very sound in her structure. This was in April of 2017, I got to work immediately and by Christmas week was exploring anchorages in the Channel Islands of Southern California. Since then I have slowly refitted her and turned her into a bluewater cruising boat. In June this year I untied the lines for good and plan a very slow crawl around this amazing world we live in.

I had the great fortune/misfortune to be introduced to sailing in 2014 aboard a custom high-latitudes boat, cruising the Orkney Islands, down the North Sea and through the Caledonian Canal. My life was changed forever and since then I have logged over 7000 miles, sailing with friends, crewing on yacht deliveries and cruising my own boat. I have sailed the entire lower west coast of the United States; explored the incredible Åland Islands and the Stockholm Archipelago; sailed from Puerto Rico to Bermuda to North Carolina; cruised the Channel Island chain near Los Angeles extensively; and have just completed my first solo ocean crossing from Marina del Rey to Honolulu, Hawaii. I hold a USCG Near Coastal Master's License and an Advanced Diver certification with PADI. All these adventures, as well as the refit of *Triteia*, are documented through weekly episodes on my YouTube channel: [youtube.com/sailorjames](https://youtube.com/sailorjames).

My solo Pacific crossing turned out to be a much bigger adventure than I had expected and I wanted to share part of that story. I hope the information in it will get stored somewhere in the back of your mind should you ever find yourself in a similar predicament. I documented the entire passage and edited it into an hour-long video for my YouTube channel.





*The GoPro camera revealed the rudder swinging freely while the rudder post remained still*

I had only been in the trade winds for two days, and was still trying to find a good point of sail while running downwind and with the seas. The winds were blowing a steady 17 knots from dead astern and the seas were averaging about 2m and running strong. I had the second reef tied in the mainsail and full genoa, and was struggling to keep her full and pulling as the waves continually backwinded the headsail. It was my 14th day at sea bound for Hilo, Hawaii and my first solo ocean crossing.

I was sitting in the cockpit hand-steering and trimming the sails when suddenly the tiller went completely slack in my hand. It felt as though time had come to a standstill and my memory of this moment is completely silent. I moved the tiller back and forth and felt zero resistance as the boat came quickly up into the wind and we began to take the seas beam-on. I sat dumbfounded for a moment, just staring. I was 1000 miles from Hawaii and had just lost the ability to steer my boat. Once I came back to my senses I clipped on my harness and went forward to drop the mainsail and furl in the



*Shortly after losing all steering*

headsail to a handkerchief. I then zip tied my GoPro camera onto the boathook and sent it overboard to see if the rudder was still there or if it had broken in half.

On viewing the footage I could see that the rudderpost had separated from the large wooden rudder, which was now swinging freely though still attached to the keel along its lower leading edge. I was very relieved that the rudder was intact, but this did not help my immediate predicament. My Sailomat windvane self-steering forms an auxiliary rudder, something I was very adamant about after crewing on a yacht delivery in 2016 during which we lost our rudder to a sand bar inside the Outer Banks of North Carolina. However the angle of the windvane made attaching an emergency tiller almost impossible and the rudder was not much of a match for my full-keel boat and the running seas. I was able to hold the windvane paddle down to one side or the other to steer the boat, but this only allowed minimal manoeuvrability unless all sails were down and the motor running.



#### *Climbing back aboard after the first dive attempt*

I knew that I needed to get in the water and see if I could secure the rudder to prevent further damage, and I hoped to be able to attach control lines that I could lead up to the cockpit for crude steering. Using my Iridium Go! I contacted Captain David Stovall, one of the many members of my shoreteam, and told him what had happened and that I planned to enter the water and see what could be done. I climbed into my wetsuit, found part of a ratchet strap, and tied a length of line to one end hoping to secure the rudder back to the post. Then I clipped two tethers onto my harness and climbed overboard, as the winds gusted between 17 and 20 knots and the accompanying seas tossed the boat about with great rolls and pitches.

Once in the water I just stared for a bit. I could clearly see a strange chip out of the aft edge of the rudder – it was still in place but I could see light through its cracked edges. Other than that the rudder seemed intact, but it was no longer attached to the rudder



stock along its leading edge. Even with all sail down the boat was still sailing at close to 1 knot, and holding on took some effort. Every time I attempted to dive under to get to the rudder I was swept back taut against my tethers, and was forced to resurface to avoid getting hit on the head by the hull, which was rolling with great force. I soon realised this would only be possible if I were becalmed, and climbed back aboard.

By this time I knew I had to make a blog post about what had happened, because it would already be clear on my tracker that something was wrong. After alerting the rest of my shoreteam about the situation and making the post, I tied the third reef in the main and hoisted it to stabilise the boat. Then I deployed my small drogue to limit progress as we were now sailing due south, and turned into my bunk to rest and consider my next plan of action.

The following morning I set up all of my scuba gear and got it in the water on its own tether. I then climbed overboard with all sail down and attempted to get into my BCD\* while being dragged alongside the boat at close to a knot. I got both arms into the BCD, but the drag on the gear was so great that I could barely hold onto the boat. Soon my arms had tensed up so tightly that I had the horrifying realisation that if I continued I might not have the strength to get back aboard. I quickly aborted the dive and used my remaining strength to get back to *Triteia's* deck and haul up my gear.

The previous night's motion had been so uncomfortable due to the beam seas and slow progress that I decided to try deploying my Rocker Stopper roll stabiliser which I use at anchor to help tame the boat's motion. I attached it amidships off the port side and tossed the orange plastic cones and 10lb mushroom anchor overboard. In a matter of seconds the boat came about and started sailing north. I cursed, hauled it up and re-deployed it on the starboard side, and we came about and returned to our southerly course. I noted that this was an easy way to turn the boat and used it several times over the next few days.

Reaching out to the two sea captains on my shoreteam, Captain David Stovall and Captain Noah Pepper, I asked for advice. They both suggested steering by the drogue, a technique I had never even heard of. Noah had done the Pacific Cup in 2012 and had learned how to steer with a drogue at Long Beach after seeing a video on YouTube. Stovall had heard about the process and searched different methods of drogue steering online to help me figure out a solution.

On the morning of my third day adrift – or more accurately of making way but not under control – I lashed the spinnaker pole across *Triteia's* pushpit, fed the spinnaker sheets through blocks amidships, ran them aft through the ends of the pole, and tied them to my hard plastic orange Sea Squid drogue. I deployed it, and then began the very frustrating process of figuring out how to make it control the boat and find her course. It did nothing. I tried it without the lines being fed through the ends of the spinnaker pole, and one of them immediately got under the steering oar of my Sailomat vane and threatened to rip it off if a large wave surged. I quickly dove half overboard to free it before this happened, and with my heart racing returned the lines to the ends of the pole. After about three hours without success, on consulting my shoreteam

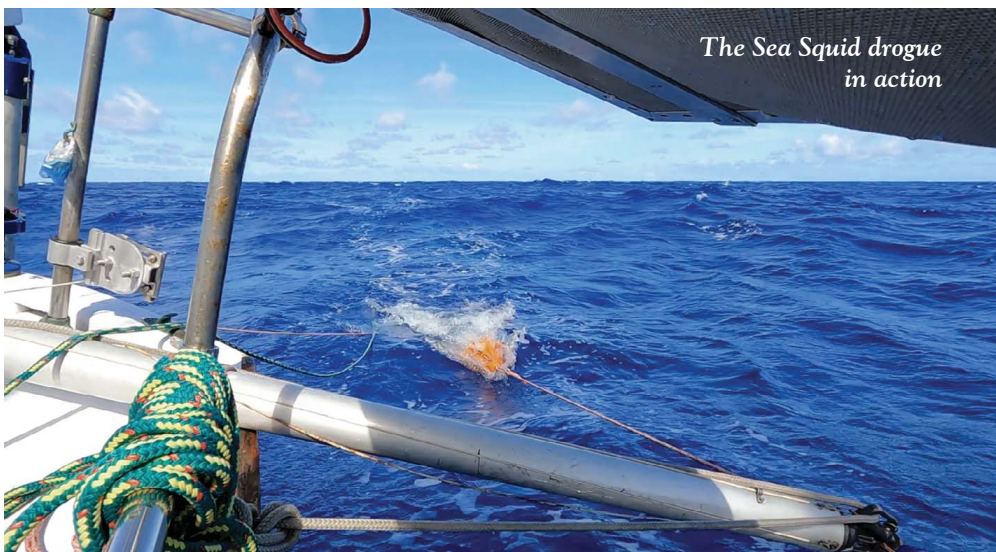
\* Buoyancy Control Device, worn by divers to establish neutral buoyancy underwater and positive buoyancy at the surface.



*Deploying the drogue with control lines in place*

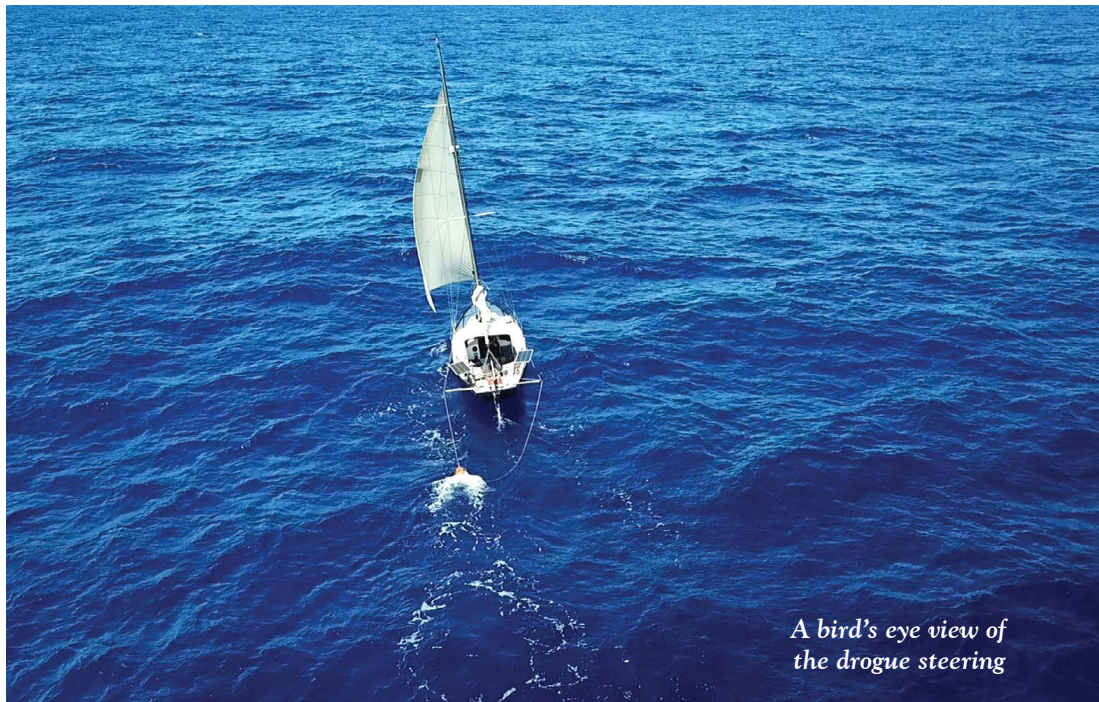
Stovall suggested putting a chain on the end. I added a 4lb scuba weight to the drogue's nose end which helped keep it underwater. Noah told me that I could not have my main up if I was sailing downwind and could only sail under headsail alone. As soon as I dropped my mainsail I was able to get the boat to find her way and stay on course. I sat in the cockpit holding my breath for an hour and a half before I even told my shoreteam, to make sure *Triteia* really was holding her course.

Running with the seas and the wind, *Triteia* held course all night as straight as an arrow. I was relieved and amazed. It took me three days to really trust the system and understand how to tune it in conjunction with the Sailomat self-steering. By the fourth day I was able to carry full headsail and make almost the same speed I would have with a working rudder.



*The Sea Squid drogue in action*





I sailed for the next 18 days and 1000 miles with the drogue astern. Slowly over that time the wind vane began to get very sloppy and started popping out of gear. After a few days of lying over the transom with my hands in the water manually turning the Sailomat's rudder to get us back on course (this brings new meaning to 'hand steering' for me) I took a GoPro dive housing handle apart, bent one of the flat pieces of aluminium, overdrilled the hole, filed down the edge and bolted it onto the top of the wind vane's rudderpost. The post was at an angle and very close to the transom, leaving little room, but that small tiller was a lifesaver allowing me to get us back on course easily and safely as the wind vane continued to lose its abilities.





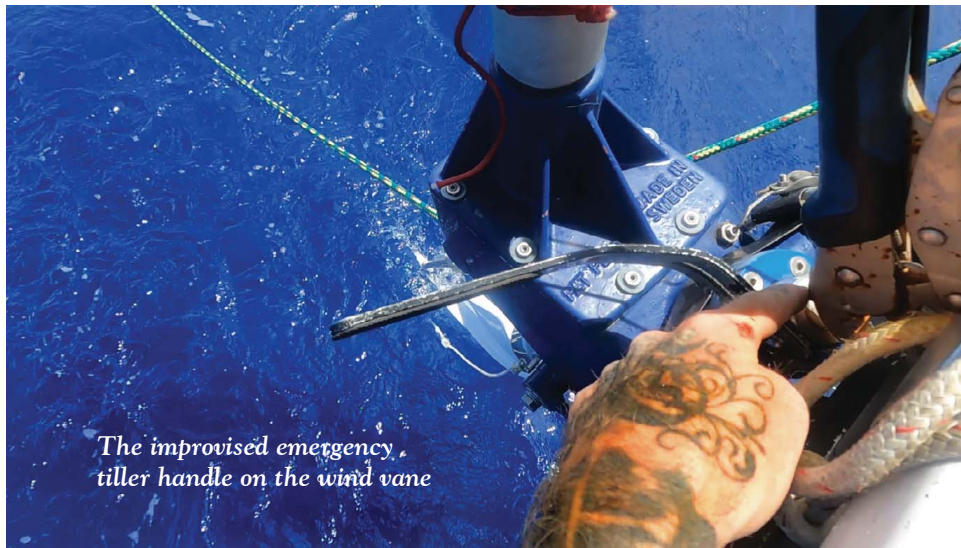
### *An albatross checks our progress*

I had read a lot of accounts about how notorious the channels between the Hawaiian Islands are – the narrow but deep channels, flanked by volcanoes, accelerate the winds and seas as the forces of nature are bottlenecked into the passes. Trying to be a responsible skipper, I asked my shoreteam to call Tow Boat US and arrange for a tow, hoping they would meet me before I got into the worst of the channel. Tow Boat US confirmed my Gold membership had me covered for the distance and said they were dispatching a boat and would text with an ETA. Then, less than ten minutes

### *Installing the improvised emergency tiller handle*







*The improvised emergency  
tiller handle on the wind vane*

later, the United States Coast Guard Sector Honolulu called me by name on VHF and informed me Tow Boat US had called them to say no one was coming to tow me. They said if I could get closer to shore they could put out a general broadcast asking if any other boat could help me.

This came as a shock as I realised I was still completely on my own, even this close to the largest city in the Hawaiian Islands. I had started my engine at 0400 and was motoring at 3 knots, the fastest I could achieve without the prop walk overpowering the drogue, and even to reach this speed I had to sheet the headsail flat to dissuade the boat from trying to turn to port. I had been fortunate in arriving at the channel in the morning and never saw more than 15 knots apparent wind, though the 2–3m seas were running fast.

*‘Hand steering’ with my leg for the last six hours of the passage*





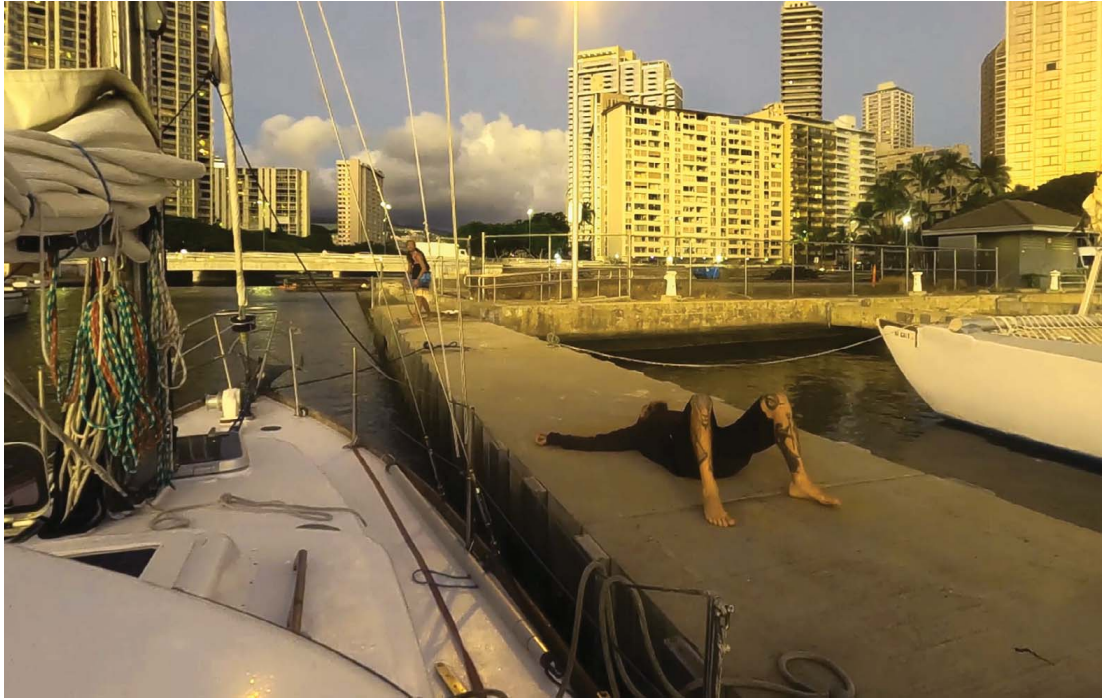


### ***Racing the wind to drop the hook at Waikiki Beach***

For the final 6 hours of the passage I was forced to hand-steer using my homemade tiller handle while sitting on the aft deck. After passing Diamond Head, with large waves breaking on the reef off my starboard side, I came hard about and motored in towards an A-frame house on the shore. Captain Mike Hawaii, a friend from Instagram who runs a tour boat, had messaged me to say that if I needed any help to let him know. On learning that no one was going to tow me I texted him for suggestions and he sent me info on a good place to anchor, telling me to use the A-frame house as my range finder and to keep the breakers off my starboard side. After many passes, trying to get lined up while only being able to turn in one direction, I dropped anchor in 25ft (7.6m) off the world-famous Waikiki Beach with 20 knots on the nose. Finally, after dropping off their last passengers for the day, Captain Mike and his crew arrived to tow me into harbour.

### ***Maori Warrior 2 towing Triteia into harbour***





*After 32 days at sea – Ala Wai Harbor, Honolulu, Oahu*

Once tied up in Ala Wai Harbor I lay on my back on the dock – I couldn't believe I was finally in port after 2300 miles and 32 days at sea. Neptune made me earn my first solo ocean crossing, which was also my qualifying passage to become a member of this wonderful club.

Safe in harbour I dove on the boat and made a jury repair using four ratchet straps, which allowed me to steer the boat under engine. I could see that at some point we had struck a submerged object which had been painted red – there was paint missing from the rudder and a red streak in its place. This impact had displaced the chip, which appeared to be an old repair, and had led to the failure of the rudderpost. The tiller had been lashed to starboard to offset weather helm and allow the wind vane to hold course without being overpowered. This had placed the rudder in danger from striking a submerged object.

I feel incredibly lucky that we did not suffer a direct strike to the hull from whatever it was that we hit. I don't know if it was a full-sized container – the red paint looks suspiciously like that used on many containers – or something else. I didn't hear the strike, and when the failure occurred there was no feeling of impact ... the tiller simply went slack.



Cruising has two pleasures. One is to go out in wider waters from a sheltered place. The other is to go into a sheltered place from wider waters.

Howard Bloomfield