

## SACKVILLE MEMORIES

Don Gordon

These are some of my memories from working on the CNAV *Sackville* during the period of 1967-1971.

I arrived as a graduate student in the Institute of Oceanography at Dalhousie University in September 1965 with the intent of doing a doctoral thesis on the dynamics of particulate organic matter in seawater under the guidance of Gordon Riley. Gordon had just arrived as well as the new director. This project would require a lot of sea time to collect the necessary samples. My first cruise as a Dalhousie graduate student was to the Irminger Sea on *Hudson* in April/May 1966. This was followed by working on the *Pamulirus* out of the Bermuda Biological Station in January 1967.

My first cruise on *Sackville* was for three days in early March 1967 (67-006). Gordon Riley had gotten the ship with the intent of providing ship time for graduate students as well as doing some of his own work. One of the graduate students also participating was Roger Pocklington who was doing his thesis on dissolved amino acids under the guidance of Peter Wangersky. Carl Boyd was also on board. The *Sackville* was well known to Dalhousie oceanography graduate students and was the principal way to get to sea, especially for those in geology since M. Keen, D. Stanley and D. Swift ran frequent cruises on her. She had a reputation for encouraging seasickness and was nicknamed the "sacktime". She was clearly a second choice compared to the *Hudson*.

The *Sackville* was based in the Halifax naval dockyard and we made several trips down with the oceanography van to load and set up our gear in the after lab. Our principle sampling gear was large 30 L Niskin bottles for collecting water samples. We also had a number of BIO Knudsen bottles equipped with reversing thermometers which were added to casts for depth correction. I believe we had a BT as well. Carl Boyd also brought along some zooplankton nets but these were not used much for Carl was seasick much of the time. The weather was not very good with high winds and overcast weather for the entire trip, typical for the North Atlantic in winter. We sailed across the Scotian Shelf in a south easterly direction. Using the hydrowinch in the after lab (starboard side), we made one station on Emerald and two more out in the slope water. The ship was not able to hold station very well and we had problems with wire angle at the deeper stations. Heavy rolling made the work even more difficult. Eating was a real challenge. The mess was several decks down below near the centre of the vessel so the motion wasn't too bad. However, the food was very basic with lots of fat and salt. There must have been a lot of Newfoundlanders on board for the menu was loaded with salt fish, corned beef and boiled vegetables. However, despite the difficult working conditions, we persevered and completed most of our intended program. It was a real treat to crash in bed for the ride home. The scientific cabins were up forward and I remember waking up the last morning to the sound of water gurgling past my head just outside the ships plates as we steamed across the shelf. Everyone was happy when we docked in Halifax.

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My second cruise on *Sackville* was four years later in April 1971 (71-013). I had finished my PhD degree at Dalhousie and worked at the University of Hawaii for two years before joining the Marine Ecology Laboratory at BIO in October 1970. This was just after the *Arrow* oil spill and I was asked to set up a program investigating the ecological impacts of oil spills. Time had been scheduled to return to Chedabucto Bay to assess conditions in the water column fourteen months after the spill. Don Bidgood of the Nova Scotia Research Foundation had the first leg of the cruise for some geophysical work before we took over. We loaded on a series of 12 L Niskin bottles for water sampling plus lab equipment for extracting hydrocarbons. Peter Vass was along, as I believe was Heinz Wiele, all three of us newly hired. It was short cruise of just three days and weather was very foggy. We only saw the shore line once as we came in close to shore near Canso. We collected water samples at several dozen stations throughout Chedabucto Bay and along the coast in transit from Halifax. Since we were in sheltered and shallow water, wire angles were not a problem during our stations. After analysis of our samples, we concluded that most of the Bunker C oil released from the *Arrow* spill was now gone from the water column. It was during this cruise that I realized just how dirty the *Sackville* was. She burned a low grade Bunker fuel and there was soot from the stack everywhere. I remember seeing some sitting on top of the butter down in the mess room. There was also a thin layer of soot over everything in the after lab. I remember moving my finger across the top of our freezer and leaving a clear line behind. We had to be very careful with our hydrocarbon extractions not to pick up contamination. This cruise took place during the Stanley Cup playoffs and the games were broadcast through out the ship.

My third and last cruise on the *Sackville* was in October 1971 (71-035). This was the first cruise in a program I started that became known as the Halifax-Bermuda Section. The purpose was to build upon the concept of the Halifax Section program and extend it out through slope water and across the Gulf Stream into the Sargasso Sea. The intent was to measure numerous variables, both natural and anthropogenic, in the water column of different water masses on a repetitive basis in order to better understanding spatial and temporal variability. The program was established to study marine pollution but other more basic variables were measured as well. The captain was S. Lillington. We had a full ship of BIO and Dalhousie personnel who were keen on setting up this new program. These included Wilf Young, Paul Keizer and Bob Fournier. Again, our major sampling gear was 12 L Niskin bottles and we also strung Knudsen bottles equipped with reversing thermometers for depth correction. We occupied several dozen stations along the transect. Five of these were selected as principal reference stations: Emerald Bank, slope water, the average axis of the Gulf Stream and two in the Sargasso Sea. We collected water samples for the analysis of temperature, salinity, oxygen, mercury, petroleum hydrocarbons, nutrients, fluoride, particulate organic carbon and nitrogen and dissolved organic carbon. Water samples were also collected to measure phytoplankton and hydrocarbon oxidizing bacteria. Even though the weather was quite good we were plague by the usual wire angle problems due to the *Sackville's* poor station keeping ability. In addition, zooplankton and nekton were collected with an Isaacs-Kidd midwater trawl plus tar balls. Unfortunately the hydrographic winch started to act up and it was not possible to do bottle casts below 2000 m which put a big hole in our program. Therefore, when we went into St. Georges, Bermuda a number of us left the ship. Those

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staying on board where able to do some shallow water sampling on the steam home. I remember sitting in the White Horse Tavern with a cold beer and juicy hamburger watching the *Sackville* steam out of St. Georges Harbour belching a black column of soot from her stack. Those of us leaving flew home, including an over night stay in Boston. No one had any money for this unexpected expense but we were able to charge everything to Bob Fournier's American Express card. This cruise demonstrated the value of four different labs sharing ship time and sampling gear to collect comparable oceanographic data along a section running from the continental shelf out to deep water (over 5000 m). This program ran for two years with cruises on *Dawson*, *Hudson* and *Baffin* approximately every three months.

While not the most comfortable vessel to work on, and certainly not the cleanest, I always enjoyed working on the *Sackville*. My time on her was early in my career and every cruise was an adventure. I always appreciated her history and distinguished career as a corvette during World War II. For some reason, her motion did not bother me that much and she is the only major oceanographic vessel I sailed on that did not make me seasick at least once. For this I am most grateful.