

Mackerel egg survey-Gulf of St. Lawrence 1972
***Sackville* Cruise 72-018b**
Timothy Lambert

In 1972 Ottawa requested of the Fisheries Research Board (FRB) at the Bedford Institute of Oceanography (BIO) an assessment of the Canadian mackerel stock. I was tasked with this project and set about organizing field work to achieve this. Stock assessments were routinely conducted by use of fish catch data; however, there being no directed fishery for mackerel this was not possible for this species. An indirect approach of estimating the number of eggs spawned was the method used.

I managed to acquire the use of two vessels for data collection; the MV *Harengus* (an elderly, converted side trawler) belonging to FRB and the CNAV *Sackville*. Two scientific crew ran part of the operation from the *Harengus*; this work was carried out daytime only since there were no living quarters for them aboard ship. However, I had three crew along with me on board *Sackville* since we were to operate 24 hours on a watch basis. *Sackville* worked the Laurentian Shallows in the southern half of the Gulf while *Harengus* surveyed the Northumberland Strait. The survey took place in late June and early July. The early part of June was warm and sunny that year but predictably our later two-week stint in the Gulf turned out to be foggy, drizzly and cold. On the bright side though, there was not much wind. We departed BIO on June 19, steamed along the Eastern Shore, then west through Canso locks to reach the Gulf.

The gear we used were Icelandic High Speed Samplers (IHSS). These consisted of an aluminum tubular body open at the ends. Water entered at one end and passed into a fine mesh net attached to the other. A plastic plankton bucket was fastened to the end of this net with a hose clamp. A bridle attached the sampler to the towing wire by means of a snap hook. This arrangement was deployed from the hydro winch station on the port side aft of the ship. Samplers were positioned by brass stoppers which were affixed to the hydro wire at 5m intervals. Samplers could be deployed and recovered while the ship was underway. The only time the vessel stopped was when a bathythermograph was deployed to determine the water temperature and depth of the thermocline above which all the mackerel eggs would be distributed.

I had been alerted by colleagues who had experience sailing aboard *Sackville* that there would be agitation to get the survey done quickly as the crew were always anxious to return to home base. I had set up a sampling grid and forewarned by this I had the ship sail to the far north-west corner of the grid such that we would always be traveling closer to Halifax as the survey progressed. This strategy worked as my answer "We are heading toward home" always forestalled further queries on the subject.

As we steamed along, I would often peer into the engine room to watch the engineers administering to the giant steam engine. I was intrigued by their actions; now and then holding out an arm to let a huge connecting rod slap against their hand to gauge the temperature of the bearing, or reaching between these moving rods with an oil can with a four or five foot spout to oil which I assumed to be the crankshaft bearings; it's not likely that safety protocols of today would allow this. There was none of the automatic lubrication of today's modern engines. What I really appreciated though, was how quiet the engine was compared to the deafening roar of a modern power plant. The loudest noise aboard *Sackville* emanated from the diesel generator.

Two of my crew hailed from Ivory Coast and were visiting Canada on some kind of exchange education program. The goal of one of them was to become a politician and so, to practise giving speeches, he would stand up on a hatch cover and request questions of his audience on any topic. This was highly entertaining for the whole ship's crew and he had us in stitches with hilarious responses to some of ridiculous questions thrown at him. The other African was fairly quiet but they were both very friendly and got on well with everyone. I often wonder if Jean-Pierre Daré Hié, as he was named, ever made it into government; he certainly had the talent and personality.

There was a bar on board for officers and scientific staff which was self-serve and run on the honour system. When you removed a beer you would leave a signed chit to indicate your purchase and later settle up with the Captain at the end of the survey. At some point I was summoned to the Captain's cabin whereupon he informed me he had a serious matter that needed to be resolved. I racked my brains to try and guess what this might be; apparently someone was taking beer and signing as Abraham Lincoln. The skipper suspected it was one of my crew. I was fairly certain that my guys would not have done this and told the captain so, but said I would check for him. My gang assured me they were innocent and the atmosphere deteriorated and became very serious when there was a threatened closure of the bar. At this point, Sparks, the radio operator, owned up to being the culprit. He was an incorrigible prankster and you could never tell when whatever he told you was true or not.

One other occasion involved the mate. Our sampling stations were spaced equidistantly and after recovering the

IHSS, removing their samples and redeploying them, there was usually about a half hour wait until the next station. I was on one night shift when strange things started to happen. Sometimes there was an excessive amount of time between stations and then on occasion an announcement from the bridge that we were on station when we were still dealing with preserving the samples from the last. I went forward to voice my concern. When the bleary eyed mate showed me our “pozsishen” on an upside down chart, I glanced at the chap on the wheel and his raised eyebrow confirmed my suspicions; the mate was half in the bag. Without raising the ire of the mate, I told him as diplomatically as possible that we really needed to hold to our survey design. He probably knew he'd been caught out and became quite contrite and thereafter things returned to normality as he obviously took more care. Our helmsman was competent, so I knew we were in no danger. He later told me that the mate at one point earlier on that watch, when we were close to PEI, had tried to take a fix on the rear tail lights of a moving vehicle on shore that he mistook for a navigational buoy.

Being in charge of our crew, I had the chief scientists cabin which turned out not to be quite the perk it appeared to be. Most of the time I had to keep the port closed as smoke from the engine would fill the cabin. However, there was a small library including a book on the *Sackville*. That's where I learned that the ship had been credited with a submarine “kill” during the war.

After two weeks, the survey concluded after having occupied 237 stations and collecting 648 samples for later analysis in the laboratory. I attempted to add one more station in St. Georges Bay where high levels of eggs were encountered on the outward leg of our trip. However, no dice. The ship and crew had the bit firmly between the teeth and the old girl was steaming at a rate that I had been told earlier was not achievable.