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Shorelines

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Self-locating Datum Marker Buoy saves lives

BY MIKE VOIGT

The newly developed Self-locating Datum Marker Buoy (SLDMB) passed its first real-life test on October 23, 1997, when the Bahamian registered M/V *Vanessa* sank in the mid-Atlantic.

Canadian Coast Guard and Canadian Forces crews used the buoys in their search for 15 crewmembers that abandoned ship. An intense search located nine survivors in a life raft, one survivor and four deceased were located in the water, and one crewmember was not found.

Datum marker buoys are commonly used to determine the direction and rate of local currents, currents that can carry people and objects away from a last known position. Until now, the chief drawback of datum marker buoys is that on-site search units must track them. The new SLDMBs determine their position using GPS and transmit this position and data on temperature, battery level, etc. to the Rescue Coordination Centre (RCC) and Marine Rescue Search Centre (MRSC) via satellite.

The new buoy was developed by Coast Guard, National Defense, National Search and Rescue Secretariat, Transport Canada and Seimac Ltd. of Dartmouth NS.

The drama began just before 3:00 p.m. on October 23 when MV *Choyang World* sent a message to RCC Halifax, stating *Vanessa*, a 109 m refrigerated cargo ship, was listing heavily and in danger of sinking. A Canadian Forces search and rescue Hercules, an Aurora, CCGS *Cape Roger*, CCGS *J. E. Bernier* and several commercial vessels came to the aid of the sinking ship, located 450 nautical miles east of Newfoundland.

MV *Choyang World* arrived on the scene before *Vanessa* went under but heavy seas made it impossible to take anyone on board. The *Choyang World's* crew could only watch helplessly as *Vanessa* sank beneath the ocean and her two life rafts drifted out of sight in the falling darkness.

At dusk the two aircraft arrived on scene along with a second commercial ship. RCC Halifax ordered the Hercules to drop a SLDMB at the last-known position of the life rafts and to begin searching. Later the search crew dropped a second SLDMB.

At 11:00 p.m. the crew of the Aurora aircraft located a life raft with nine survivors aboard and they sent in M/V *Summerwind*, which performed the rescue. Then came the bad news—the remaining six crewmembers had

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F-2 MAR 1999



Fisheries and Oceans
Canada

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Canada

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Canada

UPDATE:

WhaleLink project operating smoothly

Dear Editor:

Just a quick note to update your readers on the WhaleLink project:

The ORCA FM radio station continues to broadcast from the Swaine Point beacon, and we heard whales regularly until about six weeks ago. Now we listen mostly to waves crashing on the shore, and the odd rockfish grunting.

We hope to have a cellular-based WhaleLink device out as soon as weather allows Coast Guard lamp room crews to get out to Dillon Rock to install a solar panel for it. We also hope to have a cellular unit up on the north coast by the fall as well.

No earth shattering discoveries from the system yet. However, we continue to get a better idea of the year-round distribution patterns of whale pods on the coast.

We will also have a booth at the boat show, with demos of some of the whale sounds we've recorded.

Yours truly,
Dr. John Ford
Director of Research and Conservation
Vancouver Aquarium

Shorelines

Shorelines is published by the Canadian Coast Guard Pacific Region, and is designed to promote the exchange of information and ideas between CCG and the communities it serves.

You are encouraged to copy or reprint in part or in whole the material presented in *Shorelines*, but we request that you acknowledge the source.

We appreciate feedback from our readers. If you have any comments or suggestions, or if you'd like to be added to or dropped from our mailing list, please contact the editor at this address:

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www.pacific.ccg-gcc.gc.ca

The Coast Guard Pacific web site provides information on issues of interest to mariners on the West Coast. We've been working on the site recently to make it more user friendly—faster download, easier to navigate—and we've updated the content.

New on the Web

- Fraser River Available Water Forecasting page (this page includes a data base)
- GIS (Geographical Information System) page
- Related site of the month
- Ongoing updates of the Photo Gallery and Related Sites page

Remember to check the "News & Current Events" page to see what's happening in our region.

Contributors this issue

Bill Ariss, Brenda Austin, Max Birch, Shawn Burchett, Mike Doutaz, Wayne Fullerton, Eugene St. Prix, Mike Voigt, Brian Wootton.

A view from the new

Vancouver Harbour Marine Communications and Traffic Services Centre

BY MICHELINE BRODEUR

Modern, efficient and driven by the need to protect the ocean environment, the new Vancouver Harbour Marine

Communications and Traffic Services Centre has a panoramic view over the port of Vancouver from the 23rd floor of 555 West Hastings Street.

"We're pleased to have a central location and a clear view of port operations and activities," said Mike Doutaz, officer in charge of the new centre. "This helps our staff to provide an extensive and efficient service to our marine industry clients."

The area covered incorporates all the waters of Burrard Inlet and Howe Sound.

The Harbour Centre operation employs a new, state-of-the-art radar surveillance system to monitor the movements of vessels that work on waters inside a line drawn westward from the Iona sewer jetty, to where it intercepts a line drawn southward from Cape Roger Curtis on Bowen Island. MCTS officers provide an information advisory service to vessels assisted by the Vessel Traffic Services system, and are always alert to prevent potential problems between moving vessels.

The opening of this new centre completes the first phase of the split of MCTS operations at KAP 100 in West Vancouver. The remaining KAP 100 operation will relocate in 1999 to a new MCTS centre at the Institute of Ocean Sciences on Vancouver Island, and will cover the Strait of Georgia and Juan de Fuca Strait area.

While the new MCTS centre continues to rely on the original radar systems established at the remote sites along the coast, these radar signals are now digitised for display on modern computer monitors. Offshore Systems Ltd. of

North Vancouver installed the system, which is set into consoles provided by Trusco of Calgary.

Ship movements are recorded by an electronic "strip" and vessel data base program called the Vessel Traffic Operating and Support System, or VTOSS.

"We're proud that this system was conceived, designed and developed locally by MCTS and Technical Services staff," explains Doutaz.

A complex network fed by a variety of sources allows for fast and efficient gathering of current vessel movement data, which is then broadcast to marine clients by Regional Marine Information Centre (RMIC) staff. The RMIC also issues Notices to Shipping, distributes marine pollution reports, and provides support to all other MCTS centres in the Pacific Region.

Staffed 24-hours a day, seven days a week, the centre assists vessels by relaying emergency calls to the Rescue Co-ordination Centre, and co-ordinates communications during marine incidents. The MCTS officers also distribute marine weather information, and provide a marine broadcast service.

Twenty-five people make up the complement of Vancouver Harbour MCTS, and a staff of 30 will relocate to Vancouver Island.

MCTS on the Pacific Coast began with government owned and operated coast radio stations in about 1910, progressed to the formation of Vessel Traffic Services in 1974, and finally to the integration of Coast Guard Radio and VTS across the country in 1995.

The present-day Coast Guard Marine Communications and Traffic Services is prepared to meet the challenges of providing a safety service to mariners at sea, and to keep safe watch over the Pacific Coast environment.

Report on the Asia Pacific Maritime Safety Agencies Forum

BY EUGENE ST. PRIX

Coast Guard Pacific Region hosted the third session of the Asia Pacific Maritime Safety Agencies Forum, September 15 to 18, 1998 in Whistler.

The participants, all of whom were the executive heads of agencies responsible for maritime safety, represented Canada, Australia, China, Hong Kong, Fiji, Japan, Indonesia, Korea, New Zealand, Philippines, the Russian

Federation, Singapore, Thailand, and the United States. The topics of discussion included oil pollution, risk assessment of marine safety, bridge management resources, compliance with conventions and the future and trends of electronic navigation. Participants had several formal and informal opportunities to

share experiences and information. David B. Watters, former Commissioner of the Coast Guard, served as Forum chair and Mr. Lian Ho Chua, Director of the Training Division of the Maritime and Port Authority of Singapore, co-chaired.


Maritime safety and protection of the marine environment extend beyond national boundaries. Developing policy and implementing ideas can be difficult because governments have different legislative and administrative systems. The Forum provided a venue for maritime safety groups to develop a mutual understanding and co-operation when dealing with marine safety issues. Participants worked toward developing shared visions and objectives. They agreed to further strengthen co-operation by inviting each other to observe or participate in exercises and by sharing technology.

An on-site exhibition showcased Canadian technology and marine services. Representatives from the companies had an effective opportunity to network with many agencies from a wide geographic area, in one location.

The Forum culminated with demonstrations staged in partnership with the U.S. Coast Guard, Canadian Coast Guard Auxiliary Unit #6, CCGC Osprey, a Labrador helicopter from 442 Squadron, a Coast Guard hovercraft and a Burrard Clean vessel. There were also several static and shipboard displays.

Several participants said this forum was the best yet. Special thanks to the Coast Guard employees who organised it and helped make it a success. The next Forum is scheduled for the year 2000 in Singapore.

View the Forum website, complete with links, at www.pacific.ccg-gcc.gc.ca/apmsaf/index.htm.



ASIA
PACIFIC
MARITIME
SAFETY
AGENCIES
FORUM

PRACTICE MAKES PERFECT

BY MICHELINE BRODEUR

Picture this: A large vessel—cruise ship, or maybe a ferry—is traveling to Victoria with 2,000 passengers and 600 vehicles on board. As it sails past the Gulf Islands, one of the cars on board explodes, bringing the huge vessel to an immediate stop. A mayday is issued, emergency response swings into action, and all passengers on board must be evacuated.

Disaster? Definitely!

Can we respond? A major marine disaster exercise, dubbed CANAM SAREX 2000, will test that response on February 6, 1999. For added realism, BC Ferries has provided a Spirit class ferry and 300 to 400 volunteers from Canadian Forces and the Coast Guard Auxiliary will be posing as passengers.

The exercise is expected to take all day as passengers and crew evacuate to life rafts. Helicopters and hovercraft will transport casualties to triage sites and hospitals. Responding vessels will transfer passengers from life rafts and provide for their comfort until they are delivered ashore to an evacuation centre. Search and rescue units will organise a search for missing persons.

Passenger vessel traffic continues to grow in the Victoria search and rescue region as more and more cruise ships ply the Inside Passage from Vancouver to Alaska. In 1997 there were 12 cruise lines operating 25 ships, which completed 298 trips carrying a total of

817,000 passengers (a 17 per cent increase over 1996). BC Ferries operates ships that routinely carry in excess of 2,000 passengers. These ships routinely travel at 20 knots, and high-speed catamaran ferries will soon begin operating at 34 knots. Given these speeds, a number of casualties could be anticipated in a collision.

Not since SAR *Prinsendam* in 1980 has there been a major marine exercise involving a combined response. However, an incident, SAR *Golden Princess* in July 1996, was a reminder that a full-scale evacuation could be required on short notice. In that case, the weather was ideal and the location had abundant resources.

But most cruise ships ply remote waters where the weather is often inclement. It is therefore imperative to undertake a meaningful major marine rescue exercise that involves all responding agencies and industry. By employing only those resources that would normally be available, organisers hope to identify any weak links in the rescue chain.

Coast Guard will participate in this large-scale, on-water exercise to assess our Major Marine Disaster Plan. Other major participants include the Department of National Defense, the United States Coast Guard, BC Ferry Corporation, and many volunteer, municipal, and provincial public safety authorities. The exercise will take place in the Gulf Islands, northeast of Victoria and the Saanich Peninsula.

Are you competent?

BY NICK NILSEN

New
regulation
mean motor
boat operators
must
prove
their
nautical
abilities

Times are a changing.... As of September 15, 1999, youth under the age of 16 will be required to have proof of competency on board to operate any pleasure craft fitted with a motor. By September 15, 2002, any person operating a pleasure craft fitted with a motor and less than 4 metres in length (including personal watercraft), will be required to have proof of competency on board. Finally, come September 15, 2009, all operators of

powerboat operator, prove that you have attained Coast Guard's level of competency? One way is to present your Operator Competency Card. The card is available from Canadian Coast Guard accredited pleasure craft training organizations across the country. (A list of accredited course providers approved so far is reprinted on page 7 or check the website: www.ccgrrer.org/obs/crsdir/crsdir.htm for an updated course list). The credit card sized Operator Card is a one-time issue and is good for life. It can be obtained by passing an accredited boating safety test - or an accredited boating safety course.

Some operators will already have proof of prior training. Nautical certification or written proof of having taken a boating safety course prior to April 1, 1999 can be used to prove competency.

People who rent a motorized pleasure craft will be required to complete a Rental Boat Safety Checklist. Such operators must carry the co-signed (operator and rentor) section of the Rental Boat Safety Checklist as proof of competency for the duration of the rental.

There are, naturally, a few exemptions: non-residents of Canada who bring a pleasure craft fitted with a motor into Canada will have a grace period of 45 consecutive days from date of entry. Non-residents may also provide proof of

competency from their own country.

As of April 1, 1999 youth under 16 will not be allowed to operate Personal Watercraft, youth under 12 will be limited to 10hp or less and youth between 12 and 16 will be limited to 40hp or less.

These improvements to the existing regulations are expected to reduce accidents and save lives.

pleasure craft fitted with a motor will be required to have proof of competency on board.

This is all well and good, but how do you, as a

Individuals renting a pleasure craft fitted with a motor will be required to complete a rental boat safety checklist.

Unless:

1. They have a Canadian Coast Guard Pleasure Craft Operator Card, or
2. They have nautical certification or written proof of having taken a boating safety course prior to April 1, 1999, or in the case of non-residents proof of competency from their own country.

Those required to complete a rental boat safety check-list, must carry on board the co-signed (customer and rentor) section of the rental boat safety check-list as proof of competency for the duration of the rental.

PLEASE INITIAL EACH BOX ON THE FORM AS THE SUBJECT IS COVERED BY THE RENTAL OPERATOR / OUTFITTER.

BOATING SAFETY RULES

1. I, the pleasure craft operator, confirm that there are the appropriate number and sizes of approved Personal Floatation Devices or Life Jackets in the boat for the number of people on board. They should be worn. I am aware that persons operating a pleasure craft without the appropriate number and sizes of approved Personal Floatation Devices or Life Jackets, may be subject to ticketing and a fine.
2. I, the pleasure craft operator, am aware that it is illegal to operate a pleasure craft, or to permit others to do so, when under the influence of alcohol, narcotics, or barbiturates.
3. I, the pleasure craft operator, will only allow people who have completed and signed a Rental Boat Safety Check List, valid for the duration of this rental or have other proof of competency, to operate this pleasure craft. I am aware that persons operating a pleasure craft without proof of competency/age, may be subject to ticketing and a fine.
4. I, the pleasure craft operator, have been shown how to use, and know the location of safety equipment required under the Small Vessel Regulations. I am aware that persons operating a pleasure craft fitted with motors must keep clear of required safety equipment, may be subject to ticketing and a fine.
5. I, the pleasure craft operator, understand that pleasure craft fitted with motors must keep clear of powered pleasure craft. I also understand that I am responsible for my own wake and wash and the effects that it can have on other pleasure craft, property, wildlife and the environment.
6. I, the pleasure craft operator, when involved in an accident must stop, offer assistance and give my identity.

OPERATION OF THE BOAT

7. I, the pleasure craft operator, am aware of how to responsibly operate a pleasure craft and to share waterways in a courteous and respectful manner with others involved in all water-related activities.
8. I, the pleasure craft operator, confirm that the maximum number of persons in the pleasure craft will not exceed _____ people. I am aware of the capacity of the pleasure craft and have been shown the proper way to distribute weight in the pleasure craft for a safe and comfortable ride. I will keep my passengers in the safest positions at all times - always seated while underway.
9. I, the pleasure craft operator, have been shown the proper procedure for starting and shutting off the engine and will make sure no person is in the water within the vicinity of the pleasure craft, before starting and while running the motor.
10. I, the pleasure craft operator, have been shown and understand the operation of the throttle and gear-shift lever.
11. I, the pleasure craft operator, know where and how to operate the ignition cut-off (kill) switch. While operating a Personal Water Craft, I will stay tethered to it at all times.
12. I, the pleasure craft operator, am aware of how to depart and approach the dock in a safe and proper manner.
13. I, the pleasure craft operator, am aware of how to respond to grounding, capsizing, and re-boarding.

LOCAL HAZARDS AND CONDITIONS

14. I, the pleasure craft operator, am aware of the local navigational aids and their meaning, as well as local hazards and local regulations.
15. I, the pleasure craft operator, shall maintain a proper lookout at all times for other boats, navigational hazards and changes in weather conditions - changes in weather can occur quickly creating conditions dangerous to recreational boats.

Where can you get approved training?

A list of organizations that offer safe boating courses

NAME OF ORGANIZATION	ACCREDITED COURSE	ADDRESS	TERRITORY COVERED	LANGUAGE	MORE INFO? E-MAIL & WEBSITES
Marine Training and Consulting (MTAC)	Safe Boating	335-6540 E. Hastings St. Burnaby BC V5B 4Z5 Tel. 888.353.6822	All provinces except Quebec and Manitoba	English	www.basicboating.com
Hamilton Bay Sailing Club	HBSC Safety Course	Box 83001 Jamesville Post Office Hamilton ON L8L 8E8 Tel. 905.336.7961	Ontario	English	www.hwcn.org/link/hbhc
Canadian Power and Sail Squadron (CPSS)	The Boat Pro Manual	26 Golden Gate Court Scarborough ON M1P 3A5 Tel. 888.277.2628	All provinces	English French	www.cps-ecp.ca
Institut maritime du Québec (IMQ)	<ol style="list-style-type: none"> 1. Introduction à la navigation de plaisance 2. Cours de sécurité nautique pour motomarines 3. Brevet d'opérateur nautique, le cours 	1111 rue Lapière Lasalle QC H8N 2J4 514.367.4710 (Montréal) 418.692.1185 (Québec) 418.724.2822 (Rimouski)	Québec	French English	www.imq.qc.ca
Canadian Yachting Association (CYA)	Spark Start	1600 James Naismith Dr. Gloucester ON K1B 5N4 Tel. 613.748.5687	All provinces	English French	www.sailing.ca
Sécurité Navigation	Sécurité Navigation	3735 De Labossière Trois-Rivières-Ouest QC G8Y 6B5 Tel. 819.693.5274	Québec	French English	None
Watercraft Training Centre	Smart Rider Operator Proficiency Course	2 Brushwood Crescent Barrie ON L4N 7G5 Tel. 705.721.1976	All provinces	English French	None
Northwest Community College	Boating Safety and Boating Seamanship	130 1 st Avenue West Prince Rupert BC V8J 1A6 Tel. 250.624.6054	British Columbia	English	noliver@noradm.nwcc.bc.ca
Canadian Marine Safety and Training Institute (CSMTI)	Coast Guard Approved Boating Safety Course	Box 801 Queen Charlotte City BC V0T 1S0	All provinces	English French	malcolm@cmsti.com
Drive a Boat Canada	Drive a Boat Canada's Safe Boating Course	RR2 Lakeshore Drive Gravenhurst ON P1P 1R2 Tel. 705.687.1237	Ontario	English	boat@muskoka.com
International Sail & Power Academy (International Sail & Power Association)	<ol style="list-style-type: none"> 1. Basic Sailing Course 2. Basic Power Course 3. Operator License Course 	3034 Edgemont Blvd. Box 75504 North Vancouver BC V7R 4X1 Tel. 800.987.5494 Fax. 604.980.0080	All provinces	English	www.ispa.com ispa@axionet.com

It's interesting how fate has a way of making events appear connected. One never knows what strange turn of events life will weave for us and for others. For the crew of one capsized lifeboat, fate was working overtime.

It all began on November 9, 1998. A fire near Vancouver's Wreck Beach sent Coast Guard's Sea Island hovercraft crew into action.

BY BRIAN WOOTTON

Capsize! Capsize!

Once on scene the rescue specialists made short order of what turned out to be an abandoned beach fire. A waste of time if not for the exercise value. You've got to marvel at some people's stupidity though.

With smoke hanging in the air and water sloshing around the cabin, the crew relaxed. The danger was over—or was it?

The words "Mayday Relay" crackled over the radio refocusing the attention of everyone aboard. Several excited reports followed of people in the water in Vancouver Harbor. The beach fire had put the crew in a position to be the first vessel able to respond. Funny how things turn out.

A self-enclosed motor lifeboat had plunged 25 m from the side of its mother ship – the *Iolcos Grace*. An emergency exercise had turned all too real when a cable broke, crushing the 10 m boat and capsizing her in the process. She was drifting upside down. Several people were in the water and many were unaccounted for.

John McGrath, the hovercraft captain, swung the craft around. No time to waste. The survival clock was ticking down.

Hovercraft crews normally consist of a

pilot, a navigator and a rescue specialist. But a bit of lucky scheduling found a second rescue specialist onboard this day. So it was that Jim Garrett and John Merrett were preparing first aid and hypothermia equipment when the radio sparked to life again. This time the operator reported that two, and possibly three people were trapped under the overturned lifeboat, and divers were desperately needed to

save them. The two rescue specialists looked at each other. Realizing the gravity of the situation, they moved quickly to their rescue divers checklists. The survival clock winding down just a little faster now.

The adrenaline began to pump in earnest with each new call for help. As heart rates rose, past training helped keep heads clear, and a dive plan began to take shape. With smooth seas the hovercraft clipped along at 45 knots. Only 10 minutes to reach the scene.

Water in the harbor was a frigid 6 C and 30 minutes had clicked off the survival clock as the hovercraft landed alongside the capsized hull. Six people were pulled from the water; two remained trapped inside.

The bow door opened, and both divers exited to the side decks of the hovercraft. They briefly discussed the best way to stabilize the boat as the captain and first officer rigged underwater communications lines. The lifeboat was secured to the hovercraft and the crew assessed the damage from the surface. The captain decided to splash both divers for a closer investigation.

Within two minutes of arriving on scene the divers were underwater. People got very

quiet topside. Onlookers held their breath as the divers pressed on in their search for survivors. All the divers could hear through their communications lines was each other's breathing. What they saw gave them some cause to worry.

The lifeboat shell was still intact but for one small opening where the escape hatch had been smashed, exposing jagged fiberglass and metal shards.

Jim Garrett carefully twisted and dragged his way inside the lifeboat. John Merrett took up a post at the entry point and tended Jim's line. With their lights beaming inwards, both divers could see a person kicking to keep his head up in what turned out to be a very small pocket of air. Jim was able to swim around damaged batteries and other debris and up to the frightened survivor.

With much effort he got his own head up into the air pocket. As Jim started to explain to the bewildered survivor how they were going to get out, a new problem arose - the victim did not speak English! And the clock was ticking.

With hand signals and lots of splashing Jim spent precious minutes teaching the bewildered man how to SCUBA dive. He defied the fellow's 'survival instincts' further as he 'dunked' the man in an attempt to get him used to the air regulator. After several failed attempts, Jim began to worry about a plan B. Just how long would their luck hold - with the crippled boat amazingly still afloat and keeping a tenuous grip on the little air pocket.

Taking off his full-face mask, Jim made direct eye contact with the victim and redoubled his efforts. With relief he sensed the

survivor was ready to try a full swim.

Jim held his hand against the regulator in the man's mouth, and wrapped his other arm tightly around his back. Together they descended into the darkness.

They swam - after a fashion - back along Jim's safety line until they were at the deformed escape

hatch. John was able to reach through the jagged hatch and grab the fellow's legs. It was hard work but he finally got the victim through the hole.

The 3 m long whip on the survivor's regulator was just short of reaching the surface, so he spit out his precious air supply and held his breath until he broke the surface. Minutes later he was whisked away to a waiting ambulance.

Through what was clearly a frightening, disorienting and traumatic experience the survivor maintained his composure and quickly made a full recovery from the ordeal.

Jim and John worked to recover a second victim. Sadly this person was killed during the lifeboat's free fall.

Like so many serious search and rescue cases this story provides a happy ending for only some of the lead characters: the Coast Guard divers, crews and several good Samaritans share the families' sense of loss for the victim. At the same time they feel a great sense of relief and joy for one lucky man whose first SCUBA lesson will likely be his last!

Stop the clock. Until next time.



Old SAR vessels never die.....

BY SHAWN BURCHETT

In an age when recycling makes good sense, the North Shore Lifeboat Society has taken the idea one step further. The Society purchased and refitted a new search and rescue vessel, and launched it on November 7, 1998. Christened the *Howe Sound*

longer, and in more adverse weather conditions than the single-engine 20-foot open boat it replaces. The cabin is fitted with a small diesel heater that greatly increases the length of time the crew can search in the freezing Howe Sound Squamish winds.

Howe Sound Lifeboat saw service with another Auxiliary as the *Spirit of Sooke* with the Sooke Marine Rescue Society. It was built in 1990 and served in the Juan de Fuca Strait for eight years before being acquired by the North Shore Lifeboat Society.

The boat was stripped of all components and a mid-life refit began. The vessel was sent to Duncan to Lifetimer Boats to receive a new 42-inch transom extension and stern assembly, a new deck and

several minor aluminium fixes and upgrades. It was then sailed back to West Vancouver where the vessel was painted and outfitted with new electronics and running gear.

The project took approximately 10 months to complete and cost about \$80,000. A comparably equipped boat purchased new would cost over \$130,000.

The new boat is one of the finest equipped volunteer search and rescue vessels on the Coast and will hopefully see service for the next 15 years. It is a valuable addition to the cooperative relationship with the Coast Guard SAR stations Kitsilano and Sea Island.

Lifeboat, it will be used by volunteer members of the Canadian Coast Guard Auxiliary Unit 1 in English Bay and Howe Sound.

Howe Sound Lifeboat is a 7.5-metre aluminum rigid hull inflatable with a small cabin. The vessel is powered by two 200 hp Mercury *Optimax* outboard motors and it features an impressive grouping of electronics and communications hardware. The boat is equipped with radar, dGPS with Chartplotter, sounder and Fluxgate compass, 2 VHF radios, a multi-frequency radio, an air radio and first-aid equipment including oxygen.

The new vessel will be able to travel faster,



continued from page 1

Datum Locator Buoys prove effective for search and rescue

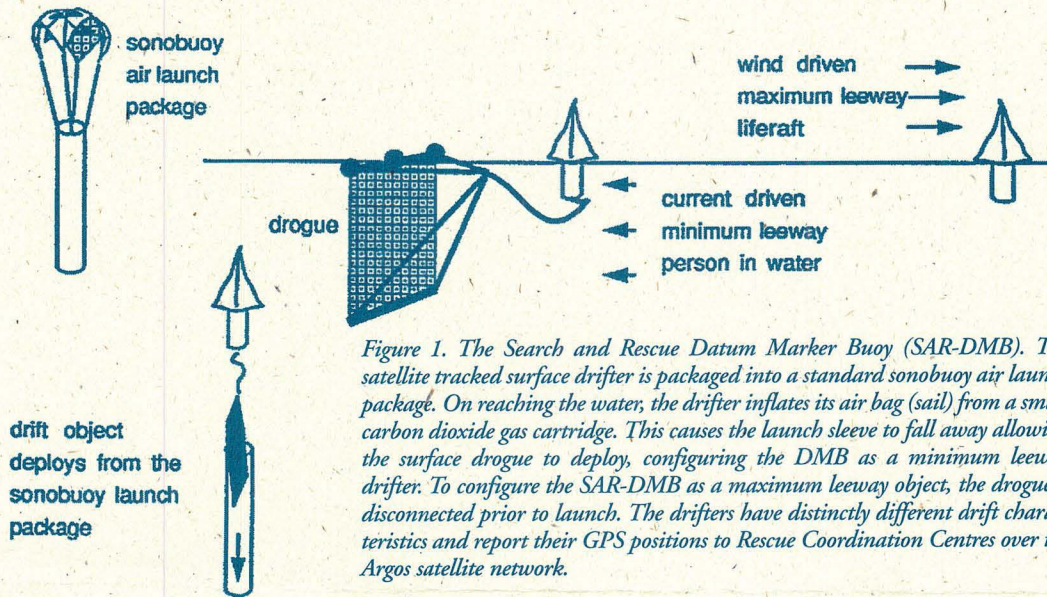


Figure 1. The Search and Rescue Datum Marker Buoy (SAR-DMB). The satellite tracked surface drifter is packaged into a standard sonobuoy air launch package. On reaching the water, the drifter inflates its air bag (sail) from a small carbon dioxide gas cartridge. This causes the launch sleeve to fall away allowing the surface drogue to deploy, configuring the DMB as a minimum leeway drifter. To configure the SAR-DMB as a maximum leeway object, the drogue is disconnected prior to launch. The drifters have distinctly different drift characteristics and report their GPS positions to Rescue Coordination Centres over the Argos satellite network.

been washed overboard and did not make it into the second life raft.

Two hours later, RCC Halifax received a hit from the SLDMB indicating the current was setting in the opposite direction to that indicated by historical current tables. This data was crucial in the rescue of the *Vanessa's* crew because the current was carrying life rafts and crewmembers away from the rescue area.

This prompted RCC staff to reorient the search 20 nautical miles to the west, a strategy that paid off at 8:30 a.m. next morning, when the Hercules crew spotted debris in the water. CCGS *Cape Roger* steamed in and conducted an intensive search of the area, recovering one survivor and four deceased. The search for the last crewmember continued throughout the day, with negative results. All aircraft and

vessels stood down when his lifejacket was recovered.

The death of five crewmembers is a tragedy but the rescue of 10 is a great achievement. As a result, Coast Guard primary search and rescue vessels, and Canadian Forces primary search and rescue aircraft are being outfitted with SLDMBs this year.

As one search and rescue controller put it: "Without the SLDMB information, we would have searched the wrong area, and definitely would not have located and rescued the survivor in time. SLDMBs save lives!"

Since *Vanessa*, SLDMBs have been used in various other search and rescue missions including SwissAir Flight 111, which crashed into the ocean off Peggy's Cove, Nova Scotia.

Coast Guard Fleet Services

Coast Guard ships are assigned to tasks based on their ability to do the best job possible. Here is a typical assignment schedule, from January through March 1999.

BY NICK NILSEN

Sure, most people are aware of Coast Guard's search and rescue activities, but saving lives is only one part of the tremendous range of duties Coast Guard crews undertake. As you can see, each vessel handles a variety of activities, some of them simultaneously. Most ships are on search and rescue standby while doing aids to navigation maintenance, or fisheries management, or research, etc. Whatever the activity, our hard-working crews keep pushing themselves to achieve the highest levels of performance and cost-effectiveness.

CCGS Narwhal: Fisheries management, search and rescue, re-supply, halibut conservation and protection, patrol.

CCGS John P. Tully: Aids to navigation, search and rescue, rosette sampling, geological and ocean monitoring during high energy storm events, fisheries management, conservation and protection, halibut patrol, herring support.

CCGS Gordon Reid: Fisheries management, search and rescue, conservation and protection, halibut patrol.

CCGS Tanu: Fisheries management, search and rescue, conservation and protection, herring patrol.

CCGS W. E. Ricker: Sweep/boom exercise, widow rockfish survey, salmon abundance/hake abundance.

CCGS Arrow Post: Shellfish hook & line, pre-herring monitoring, conservation and protection, fisheries management, search and rescue, spawn survey, roe on kelp monitoring.

CCGC Point Henry, CCGC Kitimat II, CCGC Sooke Post, CCGC Robson Reef, CCGC Chilco

Post, CCGC Skua, CCGC Bamfield and CCGC Tofino: Search and rescue, fish management.

CCGC Port Hardy, CCGC Point Race, CCGC Kestrel, CCGC Mallard, CCGC Osprey, CCGC Manyberries and



CCGC Swift: Active search and rescue response, fish management and support.

CCGH 045 and CCGH Siyay: Search and rescue and fish management.

CCGC Atlin Post and CCGC Comox Post: Fish management, herring program, shellfish, hook line.

CCGC Estevan Reef and CCGC Lewis Reef: Herring support.