

on the job



Captain David (Duke) Snider

Ice Pilot/Navigator

INTERVIEW BY ERIC W. MANCHESTER

“Duke” Snider (nicknamed for a yesteryear baseball star) is an ice pilot/navigator who has spent most of the last 27 years at sea — ten of those in the ice. From his home base near Victoria, BC, Snider divides his time between commanding Canadian Coast Guard ships, and contracting out his ice expertise across the Northern Hemisphere. Between frosty assignments, he has worked on ice-related research; was the lead author of position papers concerning international ice navigator standards and course requirements; and wrote what was to become the chapter on passage planning for Transport Canada’s “Ice Navigation in Canadian Waters.”

In recognition of his service in Canadian Coast Guard and as an ice pilot, Capt. Snider was recently nominated for the 2004 Annual Lloyd’s List’s Shipmaster of the Year Award. When the award was announced in London on February 19th, 2004, Snider was honoured as the runner-up (the award went to Commodore Ronald Warwick, the master of the **Queen Mary 2**). **Mariner Life** caught up with Capt. Snider and chatted with him about his experiences in the ice.

Mariner Life: Being an ice pilot is an interesting specialization ... how long have you been doing this, what does it involve and what are some of the challenges?

Snider: I’ve been an Ice Pilot/Navigator since obtaining my Master Mariner Certificate, which was in 1998. Ice pilots provide a ship’s master with expert advice on the unique requirements of operating in ice. Having a suitably experienced “Ice Navigator” onboard is required by domestic and international regulations which govern ships in ice-covered waters. A contracted ice pilot is hired if a ship’s complement doesn’t have the qualifications.

To enable the ship to safely proceed where ice is an impediment, the pilot considers ice and weather; preferred routing; ship characteristics and abilities; and available icebreaker support. Each day, each hour and each ship is different. On many ships, the ice pilot actually takes conduct of the vessel — resulting in extremely long hours on the bridge.

ML: What would you say it takes to succeed as an ice pilot?

Snider: It takes a desire to operate “in the moment” where strategic routing and tactical shiphandling decisions must be made frequently in extreme conditions. Patience is the most valuable trait — situations and conditions *will*, and do, change.



Adaptability and rapid decision making are vital. The ice pilot must be aware of many more factors that affect safe transit than is the case in open water.

ML: How did you come to this position? What route did you take in terms of education, and experience? Why did you choose this industry?

Snider: In 1988 I began in icy waters as second officer onboard a Canadian Coast Guard river navais tender, **CCGS Nahidik** (not ice-strengthened), working the western Canadian Arctic.

I enjoyed the challenge and the self-reliance. I may have entered the field by chance, but soon began to actively pursue the experience needed to continue in the industry. That first experience was followed by summer Arctic operations onboard the light icebreaker **Martha L. Black** as second officer, then **Arctic Ivik** as chief officer. Additional experience was gained through stints with Canarctic Shipping Company Ltd. onboard **MV Arctic** (then the world’s highest ice-class cargo ship), where

I broadened my ice resume to include the high Arctic, Gulf of St. Lawrence, Atlantic Canada, and the Baltic. Summers were spent working Arctic ice, winters in the Gulf of St Lawrence and Baltic. **MV Arctic** operated in the ice before the arrival of Coast Guard icebreakers, and after they departed at season’s end.

I returned to Coast Guard in the late 1990s as **Sir Wilfrid Laurier’s** chief officer, in the Arctic. In 2002 I was accepted by the Shipping Federation of Canada as a recommended Ice Advisor for the Atlantic Region. Subsequent to that, I’ve been on contract to provide ice pilotage services to **R/V Mirai** (the world’s largest research ship) during Arctic operations.

ML: Tell us about the vessel you’re currently working on, and the ships you’ve served on in the past. What vessel do you like to work on best?

Snider: The big contract this season is **R/V Mirai**, an incredible seagoing research platform. **Mirai** is only lightly ice-strengthened, so she poses unique challenges due to the nature of her work. The operators’ desire to achieve research goals must be tempered with the need to assure safety. It’s challenging to avoid

positions from which you can't recover. **Mirai** operates at the end of the Arctic shipping season because of the likelihood of large open-water areas, but this late-season choice demands increased weather vigilance. Changes in weather systems over Russia cause rapid temperature drops and sea ice freezing, which can trap and damage **Mirai** in mere hours. Coast Guard support is not always just over the horizon as in the past, so we're mostly on our own.

Ice-classed, rather than ice-strengthened, ships are the most fun — you can push the ship's limits in more rigorous ice regimes, breaking ice as opposed to avoiding it. With an ice-strengthened vessel, avoidance is the key, whereas icebreaking vessels can meet the ice head on, and work it.

Ships like **MV Arctic** (icebreakers in their own right) are less common, but the Russians and Finns recently built similar ships for petroleum cargoes in the Baltic. They have a conventional bulbous bow for open-water navigation. When operating in ice, they proceed stern first, as the stern is constructed as an ice-breaking bow.

I don't think that I can cite a specific vessel as my favourite, though **MV Arctic** came the closest. My dream ship is an ice-breaking research ship with at least 18,000kw power, capable of working multi-year ice independently.

ML: What do you like best about your job?

Snider: The challenge. An ice pilot must be aware of myriad factors affecting ice formation, movement and degradation, and how that affects a ship's routing and manoeuvring.

Working a ship in ice to get from A to B, with the least negative impact, is a skill beyond comparison. There usually are



On the bridge of the **RV Mirai**. Left: Capt. David Snider. Right: Capt. Masaharu Akamine (**Mirai**'s master)

icebreakers in the Gulf or in the Baltic to assist if things go sideways. But in the Arctic you are on your own. That self-reliance is an incredible feeling. It's a terrific accomplishment to depart a vessel with a smiling, appreciative master.

ML: If there's anything you'd change about your job, what would it be?

Snider: Nothing — challenges exist with every assignment.

ML: What are your aspirations for personal growth or advancement in your organization? At what level, or where would you like to be?

Snider: Personal growth occurs each time a contract is effectively, safely completed. I hope to work in both the northern and the southern hemispheres.

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RV Mirai in arctic ice.

ML: Who are the skippers you admire or look up to, and why?

Snider: Captain Fred Wedgewood, an incredible seaman, was the catalyst that started me down this path. I remember standing on the bridge of the **George E. Darby** when he suggested that one of the best things I could do for my career was take a turn on the Mackenzie River and in the Western Arctic. He told me then that it was “seat of the pants” and you had to rely on your own skills more up there than anywhere else. He was right.

Captain Gene Barry (**CCGS Terry Fox**) was one of the most impressive icebreaking captains I worked with. Watching him work ice was like watching a ballet — he could make the ship almost dance.

ML: What's your most memorable moment on the water, good or bad?

Snider: There have been many. Most recently, it would be October 3rd, 2002 aboard **Mirai** reaching the farthest north position of a non-icebreaking research ship in the Chukchi Sea. We believe it's a record, as the ship reached Latitude 72°24.4N, Longitude 162°23.4W. We tried for 73-North, but conditions deteriorated too rapidly. The temperature dropped three degrees in 20 minutes as northwesterly winds developed. We were attempting a 3,000-metre deep water sampling, but ice was forming. In the time it took to spin **Mirai** to open a pool through which to drop the CTD Rosette, it instantly refroze. **Mirai's** master

deferred to me with his “what do you think pilot-san?” A 3,000-metre cast would take two hours — too much time with ice building. We turned south and ran 25 miles in rapidly-forming new ice, where there had been open water just hours before.

ML: If you weren't doing this work for a living, what would you be doing?

Snider: I don't know what else I would *want* to do, but go to sea and work the ice — it's what I live for.

ML: What are your thoughts about the future of Arctic marine operations ... where do you see things going?

Snider: The future of ice regime shipping has promise. Though there is a hiatus within the Canadian Arctic due to mine closures, there is a slowly growing tourist/cruise market. Some developments under consideration are a deep water port in the Bathurst Inlet area; and direct shipping from Murmansk to Churchill. Nunavut wants to rekindle petroleum and natural gas exploitation in the Eastern Arctic. Winter shipping in ice off the East Coast is showing no signs of letting up. Ice conditions are returning to heavier “normal” ice years, away from the more open-water years of the past. The development of Russian petroleum

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resources, refinery and port facilities in ice-infested areas, and the continued building of ice-strengthened ships indicates that ice experience will be more required in the Gulf of St. Lawrence, Atlantic, Baltic and Russian far east.

ML: Any advice for aspiring/upcoming mariners?

Snider: It takes years of dedication to achieve the experience and knowledge required for even generalist seagoing positions. Education is more important than ever, as the profession becomes focused on technology. Modern ships are highly computerized and electronically sophisticated. A mariner cannot simply get by with a good ship and a star to steer by, but must be computer literate, IT capable and technically competent. Ships are bigger; faster; operate with fewer people; carry more expensive cargoes; and work under greater time constraints. Mariners must be flexible, mobile and educated if they are to succeed in a global market.



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