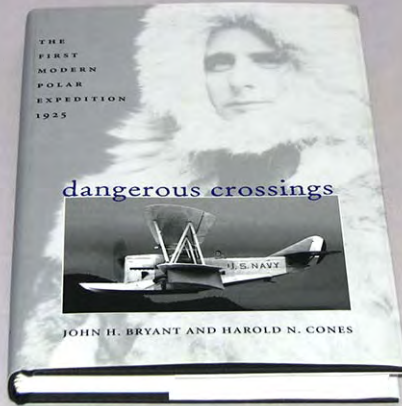


# K9YA Telegraph

Robert F. Heytow Memorial Radio Club

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## Dangerous Crossings

Book Review

Philip Cala-Lazar, K9PL

*Dangerous Crossings: The First Modern Polar Expedition 1925*

The 1925 Navy-MacMillan Arctic Expedition holds particular significance for radio amateurs. It is remembered as the first expedition to successfully use short wave frequencies,

specifically the then new HF amateur bands at 20-, 40-, 80- and 160-meters. This frequency flexibility enabled the expedition's vessels to communicate with logistics teams in the U.S., broadcast and print media and Zenith Radio Corporation headquarters in Chicago. Coincidentally, thanks to amateurs serving as the expedition's radio operators, it offered new and rare DX to hams.

Another first attributed to this expedition was the successful deployment of heavier-than-air craft for exploration, aerography and mapping purposes. The U.S. Navy airship USS *Shenandoah* was considered during the expedition's planning stages, but negotiations proved unsuccessful. (See: *K9YA Telegraph*, "USS *Shenandoah*," July 2008.)

*Dangerous Crossings* introduces the reader to the expedition's three principals: Donald B. MacMillan (1874-1970), explorer; Eugene F. McDonald (1886-1958), head of Zenith Radio Corporation; and Richard E. Byrd (1888-1957), aviator. These three, thanks to their reputations, experience, governmental, military and industrial connections made possible assembling the four-month expedition on short notice.

From the expedition's planning stages to its conclusion the personal and working relationships between these three accomplished men was anything but amicable. The MacMillan-McDonald relationship was harmonious and productive, but their relationship with Byrd

grew increasingly troubled. Eventually, Byrd and MacMillan communicated solely by the exchange of notes.

The expedition was sponsored by the National Geographic Society, financial; the U.S. Navy, aircraft, pilots, logistical support and radio gear; and Zenith, purpose-built transmitters and receivers.

Authors John Bryant and Harold Cones also wrote *The Zenith Trans-Oceanic: The Royalty of Radios* and *Zenith Radio: The Early Years, 1919-1935*. Thanks to their breadth of knowledge *Dangerous Crossings* offers

readers a more detailed examination of the expedition's radio gear and its operation than is normally encountered in generalist books of exploration.

Revealed in *Dangerous Crossings*, is the authors' discovery, "in a closed Zenith plant in Chicago," of "154 file drawers" of Eugene McDonald's discarded personal records spanning the years 1927-1958. These documents cast a new and

revealing light on the expedition and its participants.

The expedition's primary objective was to locate the immense, yet elusive Crocker Land, a land mass sighted by previous expeditions and thought to occupy thousands of square miles in the Arctic Ocean north-east of Alaska. Eventually, thanks to the three Loening

CONTINUED - DANGEROUS CROSSINGS ON PAGE 7

"...a new  
and revelatory  
light..."

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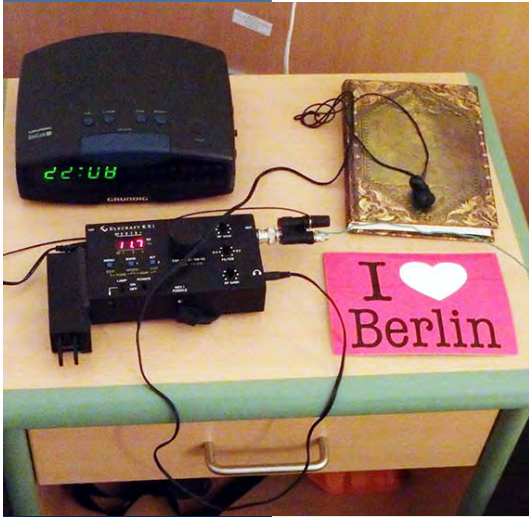
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# European QRP Vacation

**Chuck Guenther, NIØC**



DA/NIØC

Two years ago, my wife and I spent six weeks in Germany (mid-May to the end of June, 2012). Margaret took a small class of Fontbonne University students to study in Berlin during the first four weeks. We stayed at the Teikyo University campus in the resort town of Schmoeckwitz, east of Berlin, and commuted daily by bus and trains to the historical parts of Berlin. We also took the students on side trips to Potsdam, Spreewald and Wittenberg,

and overnight trips to Dresden and Nuremberg.

On June 15, Margaret and I said goodbye to the students, and had our vacation. We spent several days each in Bacharach (Rhine Valley), Staufen (Black Forest), and Mittenwald, Grainau and Oberammergau in the Bavarian Alps. We took advantage of the good weather and did plenty of hiking in each of these places.

On this 2012 trip, I brought a Sony ICF-7600GR shortwave portable receiver and a wire reel antenna, and spent a little time listening to the ham bands. The cuckoos at Schmoeckwitz woke us up before sunrise most mornings (around 4:00 a.m. at this time of the year, as Berlin is at 52.5 degrees north latitude). Of course, I listened to my favorite ham bands. There was a lot of activity on 40- and 80-meters CW, especially during the WPX CW contest. I was disappointed I didn't hear any North America stations, but there were a lot of Asians and many very loud local EU stations. I regretted not taking along a transceiver instead.

Then, in 2014, Margaret received a grant to take a new group of students for her course in Germany. She shortened the stay in Berlin, and added several days in Munich to the syllabus. Again, we took two weeks vacation time afterwards, this time venturing into Switzerland and France, as well as visiting some

of our ancestral towns in the Rhineland Palatinate state of Germany.

This time, I brought along a QRP transceiver and some antenna wire for radio fun. Since we traveled by train, the weight of our luggage was definitely a consideration, so I packed my "trail-friendly" Elecraft KX1, which covers the 80-, 40-, 30- and 20-meter CW bands, and includes an integral automatic antenna tuner. I also have a set of Palm paddles attached to the KX1 case, as inspired by VE3WDM: <http://ve3wdm.blogspot.com/2010/11/theres-new-key-in-town.html>

With the paddles retracted into their housing, the KX1 and a pair of earbuds fit nicely in a Pelican 1120 case. I used a larger Pelican case (1200) to carry an AC adaptor (12V at 1.25A), a Par end-fed antenna, some additional antenna wire and coax and miscellaneous insulators and rope. Into each case I put copies of my amateur radio license, the CEPT agreement

pertaining to overseas amateur radio operations and an instruction sheet for the KX1 menu settings. For our flights, I carried the KX1 (which contained six fresh AA lithium batteries) onboard in my daypack, while the antenna wire was stowed in my checked luggage.

I have some experience operating QRP from home, having worked around 50 countries in all continents with my

K2 and KX1 radios at five watts or less, using good

*"The cuckoos of Schmoeckwitz..."*



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View From Hotel Window in Muenster

vertical antennas. My most memorable QRP contact was with KL7RA on 160-meters. However, my past attempts at operating the KX1 from stateside hotels with a short wire thrown out the window were not very successful. I do recall my CQ on 40-meters from near the Donner Pass in California being answered by a station in San Diego. So my expectations of DX work were rather low, especially if I could not find suitable antenna supports at the places we stayed.

Unfortunately, this turned out to be the case. I was not able to employ the 43-ft. Par end-fed at any of our hotels. At the two places I managed to operate from, I used only a short (approx. 23 ft.) wire tossed out a hotel window and a 15-20 ft. counterpoise wire in the room. The KXAT1 antenna tuner was able to provide a match for this compromise antenna on 20-, 30-, and 40-meters, and the KX1 power output using the AC adaptor was 2.5 to 2.9 watts.

My first EU operation was as DA/NIØC, operating from the Teikyo campus at Schmoeckwitz during the CQ WPX CW contest on 25 May. The antenna wire extended for about eight feet into the hotel room and across our second story balcony, then dropped 15 feet to nearly ground level. I operated for only about 30 minutes on the 20-meter band, and managed three QSOs, two Russians in the Moscow area and one with the Ukraine. I called other stations, including a couple of UA9s but I was not heard. Still, I was pleased this minimal effort on my part resulted in reaching distances approaching 1,000 miles.

There were few antenna deployment opportunities at our other hotels in Germany. In Nuremberg, we had a nice balcony, but there was a coarse plastic screen protecting the building from pigeons and a restaurant below us with tables and umbrellas. I chose not to risk tangling my

antenna wire in the screen or dropping the end of my antenna near dining hotel guests.

In the little town of Muenster in the Goms Valley of Switzerland, I managed three operating sessions as HB9/NIØC on 20-, 30-, and 40-meters. My 23-foot wire was dropped out the third story window at the rear of the Croix d'Or et Poste Hotel. (This was our third stay at this historic hotel, which dates from the early 1600s—our previous stays were during winter vacations for cross-country skiing.) I worked Russia, Norway, Romania, Latvia and Kosovo, mostly during a contest over the weekend of 13-15 June.

On the morning of 15 June, I had a pre-arranged schedule with my friend Helga, IN-3FHE, a rival competitor in the monthly CW Freak competitions: [http://www.ji0vwl.com/cgi/cw\\_freak\\_net/](http://www.ji0vwl.com/cgi/cw_freak_net/). Helga took some time out from contesting so we could have a brief chat on 40-meters. Since my return to the states, we both achieved new all-time personal bests in CW Freak, but she soared past me with a score of 188,520 points and 67 wpm, qualifying for the rank of “Freak.” Congratulations to Helga!

Most of our time in the Goms Valley was spent hiking the trails leading up to glaciers in the Alps. Days were long, and the hikes were demanding, so I did not have much energy for radio operating for very long. It was enjoyable, nevertheless, and I look forward to operating

QRP from more places in the future. ■

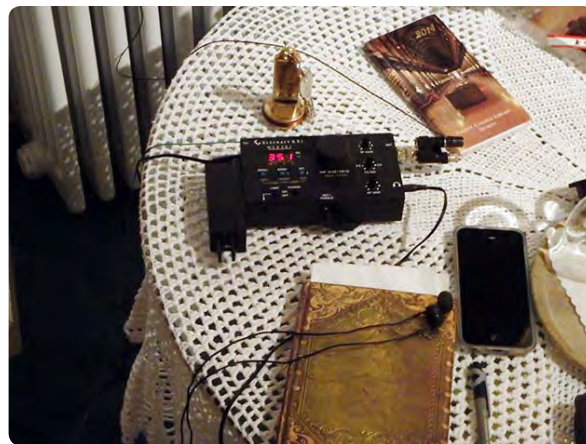
*“Congratulations to Helga!”*



Chuck, NIØC  
Alpine Hiking



Muenster, Valais Canton, Switzerland



HB9/NIØC

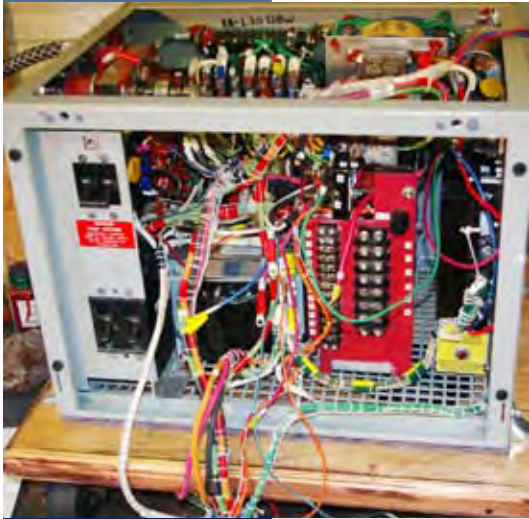


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# Staying on Track

Hal Mandel, W4HBM



Project Power  
Supply Chassis

There was this whole article planned, from start to finish about building a combined power supply for my Yaesu FT-2000D radio. The thing came with a tiny switcher supply that not only makes RF hash, but also gets real hot, even with a little fan running underneath it.

This project had all sorts of photos and schematics. It had woodwork, chassis work, sewing, electrical work, soldering, brazing, computer-design work; it kept me busy in the

shop building for weeks at a time, and the *Telegraph* people even thought it would make a great article.

## Questions

But then somebody hadda open their big mouth and ask, “What are you building out there?”

“A power supply for the radio.”

“Don’t you already have one?”

“Yes, but this one is different, it won’t make noise.”

“What noise? The only noise I ever hear comes out of them loudspeakers you scare the cat with.”

“It’s electrical noise.”

“So why not just fix the one you already have?”

(I should realize the war is over. There is no winning. I am caught. There is nothing I can say that will redeem myself. Okay, here it comes.)

“You have all those logs blocking the driveway. When are you going to get them ready for the stove?”

So the Combined Linear Power Supply gets covered with a towel, and out to the driveway with the little splitter. All goes well until I try and get one of these hundred pound chunks up on the beam. Time to

think about renting the big boy from down the Ace Hardware.

So I gets my name on the reservations list and, Lo and Behold, the day comes and it’s pouring rain. Just teeming. I call the hardware and cancel and put my name on the next open Saturday, three weeks away.

## Kindling

Meanwhile I work on the little stuff, as our coal stove needs kindling just a bit bigger than No. 2 pencils to fit in the door. Hey, it keeps me outside, sitting down, and out-of-trouble. Most of it stacks on the porch, which is just fine by me, but until said pile is gone I figure I better stay out of the radio shop shed.

The big day arrives, and it’s a whole Saturday and Sunday out in the driveway. The big kludges can roll over to the splitter because it will tilt upright for the

heavy wood. Sunday night comes and the driveway is just littered with split wood, bark, leaves, junk, dust and I’m ready to just sit down. I couldn’t care if the *Titanic* landed on our front lawn. I almost brought a lawn chair into the shower stall.

I make the announcement about hurting my shoulder lifting the logs and so the immediate chore of stacking 9,345,672 toothpicks is delayed, so I sneak back in for some radio building.

“What noise?”



Filter Capacitor



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It's like there's a heterodyne in the kitchen. What is it with me enjoying myself for a few minutes?

"When are you going to clean the chimney?"

Somehow I wrangle the extension ladder AND the 6-foot stepladder over to the chimney, and when I drop the cleanout tin, mostly wasps come out. They're dead, or faking pretty well, but I don't hang out to do any autopsies. I get the spray from the tool shed and wash down whatever I can see.

### Stove Pipe

The next is the inside stove pipe. That builds up soot real fast, and you can just imagine what a holy mess that is when I knock her apart and attempt to get the pieces out the front door. They used to be good and heavy, but a couple of years and some tons of coal have reduced them to just a bit thicker than tinfoil, so it's back to the Ace for a set of stove tubes.

It's a whole day, morning 'til night before I get the pieces cut and fitted. This time I wore leather gloves so as not to slice my hands like the last time. (All this time I'm thinking about that power supply, and if it'll cut some of the I-F hash, and just kicking myself for getting into this mess.

The stovepipe ring is loose and the old gasket is tore up. Back to Ace.

It takes the oxy-acetylene and hammers and WD-40 a couple of hours to free up the old bolts, and by that time I am black from head-to-toe with soot.

The ring is fixed and the new smoke pipe is in place and screwed together. Then I look in the stove to see if there are any busted bricks and see four cracks in the sheet metal.



Chimney Cleanout

*"...thicker than tinfoil..."*

Do you have any idea what the payment and explanation was in getting the oxy-acetylene rig in the house, in the living room? You don't want to go there.

Welding torches sometimes let off a good crack when neutral mixture builds up in the weld and lights up. It detonates, is what it does and everyone I know jerks a little when it happens right in front of them. I didn't tell the cat to be sitting right outside the window when the torch flame popped, but you know who had to apologize for scaring him.

### Now?

So, let's sum up: Chimney cleaned, big logs split, small stuff stacked, stove welded, stove painted with Rutland Black Polish, hearthstone scrubbed, debris around stove picked up, tools put away. Time for Building!

"What about all those pieces of wood still in the driveway?"

"They're for the next round of splitting because they were too big from when the big splitter..."

"So when are you planning on getting them split?"

"When I get a chance, probably right after I finish up the power supply."

The punishment is severe. Anyone here ever go to Catholic school and try an experiment with sassing a nun? You only do it once, right? But me, I'm a sucker for pain, and I live with (temporarily, here and there, that is) a female who outclasses me in jujitsu, but I never learn. ■

### Call for Articles

Have a story to share? An experience to relate? Some gear to review? A technical tip to dispense? Feeling didactic or pedantic? Write it up, add a couple of appropriate photographs and send them off to the *K9YA Telegraph*. Hams worldwide will thank you, and so will we.

Here's the place to start:

[http://www.k9ya.org/write\\_for\\_us.htm](http://www.k9ya.org/write_for_us.htm)



Firewood



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Scott B. Laughlin, N7NET



Charlie McAntire returned to an empty house. He knew it would be vacant, but somehow the absence of his father's voice, his laughter, the smell of his oily coveralls impacted him with a force greater than anything he expected. The place felt like a jigsaw puzzle with a piece missing. The eighteen months since his father's passing were gone in one fell swoop. It seemed like yesterday that he'd received Harley Grover's telegram at his Iceland duty

station. His death had been sudden and unexpected, Harley, his father's close friend, stated in his wire. The Red Cross offered an emergency leave, and Harley was ready to postpone the funeral. *Just say the word*, Harley added in the last line.

He wanted to go home but there was a war on, and he felt his obligation to his country was greater than his personal feelings. But he slept on the problem anyway. The following morning his decision was final. Women flight crews were ferrying fighter and bomber aircraft to England as fast as American factories could produce them. Iceland was a critical communications link for those aircraft, if he took his leave he wouldn't be there to help with the urgent radio traffic. There was nothing he could do for his father. If he was watching from above, Charlie knew he would approve. He wired Harley to press on with the funeral. He was not coming home until the war was over.

Now, standing in the living room, he wondered if taking that leave would have made any difference on how he felt today? Perhaps the impact would not be so great. The smell of his father still lingered after all these long months. Now that the war was over he would have to open his dad's shop or get a job.

He needed a distraction. Rather than unpack, he tossed his duffle bag on the sofa and went to the shop.

The tools and equipment were all in their places. It was almost as though his father was out getting parts. But there was his car, a 1938 Dodge. It had collected dust that had filtered through cracks around the windows. His father's trickle-charger had kept the battery topped off. Charlie wondered about the gasoline. It was more than a year old. Would it still burn? The strong battery started the motor with surprising ease.

While the engine idled, Charlie decided to drive to May's Café for a cup of coffee, maybe a piece of pie, and hopefully some conversation. Maybe seeing a few old friends and acquaintances would clear his head so he could decide what he to do next. Opening the shop was the logical answer. He'd worked with his father at Henry's Automotive since he'd started high school. He knew the mechanic trade.

"Charlie!" shouted May as he pushed through the café door. The heavyset woman rushed toward him, catching him in a bear hug before he had completely cleared the entryway.

Heads turned and faces broke into smiles. He was several minutes gripping the many extended hands.

"When are you going to open your dad's shop?" asked Ned, an old, prewar customer.

"The thought has crossed my mind, but I need some time to sort things out. I've

only been home two hours."

"By Jove, we haven't had a good mechanic since the draft board took you away from us," Ned said, pumping Charlie's arm.

"Do you still have your ham license? Are you getting back on the air?" asked Melvin, the portly hardware store owner who stocked amateur radio parts.

"Oh yeah. But the government still has the frequencies locked up. There is scuttlebutt that the frequencies will be released any day now," Charlie assured him.

The conversation continued and Charlie whiled away the afternoon at May's. By the time he was ready to head for home he knew what he had to do. ■

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*"He needed a distraction."*



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OL-2 amphibian aircraft especially prepared for this mission and their dauntless pilots, Crocker Land was declared a permanent “Arctic Mirage.”

The expedition’s two ships, the oak and ironwood schooner *Bowdoin* (Commander MacMillan, call sign WNP [Wireless North Pole]) and the ex-French navy minesweeper SS *Peary* (Commander McDonald, call sign WAP) disembarked from Boston, Mass. June 17, 1925 headed for Etah, Greenland via calls at Wicasset, Maine; North Sydney, Nova Scotia; Battle Harbor and Hopedale, Labrador; Godhavn and Umanak, Greenland.

Commander Byrd led the U.S. Navy aviation detachment. Three Loening amphibians were shipped, dismantled and crated, atop the deck of the SS *Peary*. While anchored at Godhavn the navy pilots participated in Morse code classes in preparation for their airborne CW work.

Previous Arctic expeditions found radio propagation from that region, “beyond the auroral belt,” notorious for its poor and unpredictable behavior. The long wave frequencies they used, including the standard navy frequency of 500 KHz, during the Arctic summer’s “land of the midnight sun,” all but assured that behavior. So, for this expedition, amateur radio short wave bands were tested to provide more robust communications—40-meters most successfully. (The U.S. Navy demanded, at the cost of losing their support, aircraft and personnel, the addition of navy long wave gear to the *Peary*’s radio complement.)

**Radio Gear**

The man chosen to help design and build the short wave gear and ultimately serve as chief radio operator was John L. Reinartz (1894-

1964), 1QP-1XAM, already an accomplished and celebrated ham. In 1923 he was part of the legendary Transatlantic Test team. His tuner and transmitter circuits frequently appeared in the pages of *QST*. He has been called the “father of short wave radio” for his early work in that part of the RF spectrum. Reinartz served aboard the *Bowdoin*. Radio operator aboard the SS *Peary* was Paul McGee, 9AE, of Mattoon, Ill.

Reinartz, working with Zenith engineers, Karl Hassel, R.G. Mathews and H.C. Forbes, developed the expedition’s radio equipment over a two-month period in 1925. The transmitters, a 250-watt aboard *Bowdoin*, covered “20, 40, 80, [150] and 275 meters.\* *Peary*’s transmitters comprised a 2-kW navy standard 500-cycle spark set and a Zenith 2-kW tube set for 500 meters and other frequencies. Receivers included a



Commander MacMillan  
Image: Library of Congress

“Reinartz-Zenith receiver, a Super Zenith receiver, a longwave receiver for press messages and time signals, and two portable loop broadcasting receivers for use by exploring parties or planes in distress.” The aircraft were equipped with navy standard 500-meter sets and innovative Burgess Laboratories-designed short wave sets good for voice and CW operation on 37-42 meters and running off dry cell batteries. Short wave signals were found “eminently useful” for exchanging messages between the expedition’s two ships.

“...oak and ironwood...”

*Peary*’s WAP reported daily to Zenith short wave station 9XN located 40 miles northwest of Chicago with messages to Zenith, the U.S. Navy, the National Geographic Society and from expedition members. Signals intended for broadcast were relayed by 9XN to Zenith’s purpose-built broadcast station WJAZ located in Chicago’s Edgewater Beach Hotel. Weekly broadcasts included Inuit music programming and McDonald’s progress reports.

Stations in the “United States, England, Scotland, France, Holland, Italy, Hawaii, New Zealand and Australia” heard WAP. Lieut. Fred Schnell, 1MO, also heard WAP, with strong signals, while aboard the heavy cruiser USS *Seattle* at Wellington, New Zealand for the U.S. Navy’s 1925 Southern Cruise



The Schooner *Bowdoin*



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## The Last Word - Bob Cashdollar, NR8U

**FROZEN TUNDRA, Finland** – The operators of Radio Arcala announced today that they were suspending any further base-jumping activities from their monster beam. The reason given was due to an accident by one of their members. According to the official spokesperson, Sven Nyquist, one of their radio operators, climbed the tower and out onto the end of the beam and did a “header off the end.” Apparently Nyquist was a little (or a lot) inebriated from a party the hosts had provided to the radio operators after they destroyed the competition in the American Radio Relay League’s Winter DX competition.

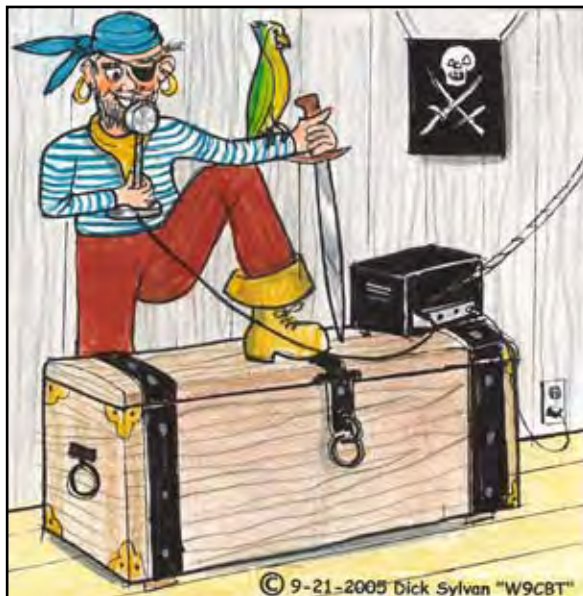
“We never missed him until the next day and then we thought he just went home,” said the official spokesperson.

Several days after the party, a Radio Arcala member was walking towards the tower when he noticed a pair of boots resting upside down in the snow under one end of the giant structure. Upon further examination it was found that the boots contained feet apparently attached to legs. Nyquist’s podiatrist was brought to the site and identified the feet as Nyquist’s by the corns on the big toe of the left foot.

It was noted among several of the party attendees that they thought they heard Nyquist say he was going outside to “take a leak,” but after their world class hangovers subsided they admitted it could have been “leap.”

“Well, at least we know where Sven went and where he’ll be until the ground thaws next July,” stated the official spokesperson.

## Ham Lingo DICK SYLVAN, W9CBT



“PIRATE RADIO”

CONTINUED - DANGEROUS CROSSINGS FROM PAGE 7

of the Antipodes. (See: *K9YA Telegraph*, “CQ USS *Seattle*,” September 2008.)



SS Peary

## A Revelation

Radio amateurs, certainly, will be intrigued and, perhaps, disturbed by revelations of Reinartz’s alleged behavior as the expedition’s chief radio operator. According to McDonald’s previously unknown documents, Reinartz frequently failed to send daily administrative reports to the *Peary* and the U.S. Navy. This behavior was variously ascribed to equipment breakdowns and Reinartz’s bouts with seasickness. McDonald attributed this neglect to “...his desire to impress and communicate with his amateur radio colleagues.”<sup>†</sup>

This behavior was deemed sufficiently serious for his demotion to radio operator and McGee’s promotion to chief radio operator.

*Dangerous Crossings* is a good read for any one interested in exploration, radio or aviation. For those interested in all three, the book is a solid home run. The timeless tale of man versus the forces of a primal, frozen nature, countered by the fragile, yet increasingly sophisticated, tools of the early twentieth century.

\*Bands cited vary somewhat by reference sourced.

<sup>†</sup>Reinartz quoted in the June 28, 1925 issue of the *Chicago Daily Tribune*:

*His farewell to amateur radio men sums up the problem [radio propagation from north of the Arctic Circle] which is now in a course of solution.*

*He said: “Remember the success or failure of the radio portion of this expedition rests with the amateurs and whatever is accomplished will be entirely through their cooperation.”*

*Dangerous Crossings: The First Modern Polar Expedition 1925*, John H. Bryant and Harold N. Cones, 2000, Naval Institute Press, Annapolis, Maryland, ISBN 1-55750-187-4 ■