



The Antarctic Society

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WILL ANTARCTIC SCIENCE ADVANCE ANOTHER LEVEL?

When the third polar year – the 1957-1958 International Geophysical Year – replaced start-then-stop expeditions with continuous Antarctic programs, scientific output went up. The fourth one – the 2007-2008 International Polar Year – used far better research tools such as satellite observations, computer visualizations, and modeling. Scientific output went up some more.

The need for boots on the ground remained unquestioned. Even remote sensing requires ground truth, dictating a continuing human presence.

Those boots need places to sleep, eat, and do science. Some new stations are breathtaking: Belgium's Princess Elisabeth, an aerodynamic pod on steel legs built in 2009, is the first with zero emissions. Solar and wind energy run it, great insulation greatly reduces heat loss, and waste heat and human activity keep the interior warm. For more, see "From huts to sci-fi chic."

Of course, for years that human presence has been challenged by automated monitoring devices that transmit weather and geophysics to home institutions by satellite. In fact, unattended stations already outnumber the human-occupied facilities in Antarctica. We'll cover this in a future issue.

Now, though, comes another challenge to some of the human presence. Two British Antarctic Survey staff have opened a discussion of how nations should be selected for consultative, or decision-making, status in the Antarctic Treaty. While a physical Antarctic presence may historically have been a major factor, shouldn't scientific output – however achieved – be the more useful criterion? See "What makes a nation consultative?" inside.

Three remarkable Antarcticans are commemorated below. The Ice draws accomplished individuals; these men each made unique contributions.

Other news includes a report on the Society's 2016 board meeting and the next Antarctic Gathering in Port Clyde, Maine, 20-22 July 2018. Read on!

Guy Guthridge

20-22 July 2018: mark your calendar for the next Antarctic Gathering!

Treasurer and Guiding Soul Paul Dalrymple has graciously, again, invited the Society to cosponsor with him an Antarctic Gathering at his house in Port Clyde, Maine, to take place Friday through Sunday, 20-22 July 2018.

The format will follow that of the highly successful 2016 event, which attracted 114 Society members and guests: a Friday evening meal of outstanding fish chowder, a Saturday of Garage Theater presentations, and a gala Sunday lobster brunch.

We especially hope, this go-round, also to attract any and all 1957-1958 International Geophysical Year alumni(ae). Your 60th anniversary!

Gee. Coastal Maine, summer, seafood, colleagues new and old, and presentations that will glue you to your seat.

It's not too early to sign up, even if you're only tentative at this point. We encourage you to do that and have started a list. Write Paul Dalrymple or your editor (Guy Guthridge) using an email address shown on the front page of this newsletter.

Surface temperature extremes in the Antarctic

The World Meteorological Organization, reporting an evaluation of surface temperature records, has a new paper in *EOS* (American Geophysical Union) stating Antarctic record *high* temperatures and explaining how they were verified.

Three record highs are given:

- one for south of 60°S: 19.8°C (67.6°F) observed 30 January 1982 at Signy, a British station on Signy Island, elevation not stated but near sea level, latitude 60°43'S

- one for the Antarctic continent: 17.5°C (63.5°F) observed 24

March 2015 at Esperanza, an Argentine station near the tip of the Antarctic Peninsula, elevation 13 meters, latitude 63°24'S

- one for the Antarctic plateau: -7.0°C (19.4°F) recorded 28 December 1989 at D-80, a U.S.-operated automatic weather station (AWS) in Adélie Land, elevation 2,500 meters, latitude 70°06'S

The paper contains the following caveat: "As with all WMO evaluations of extremes (e.g., temperature, pressure, wind, etc.), the extremes presented here are the highest observed temperatures placed before the WMO for adjudication that passed WMO's standards for such data. It is possible, indeed likely, that greater extremes can and have occurred in the Antarctic but have gone unreported."

Here's where things get interesting for your editor, who is not a meteorologist. The new *EOS* paper starts this way: "On 21 July 1983 the lowest temperature ever observed on Earth was recorded at a Russian research station [Vostok] in central Antarctica: The thermometer at the site read -89.2°C (-128.6°F). But it's not just the lowest lows that have caught the attention of scientists in the Antarctic. Especially in the face of climate change, researchers have also begun to investigate how warm the planet's southernmost region can get."

Pondering that record low

The Vostok temperature was observed on 21 July 1983, and it is credible in two ways. It is not much lower than the August 1960 record of -88.3°C for the same location, and it is published in a 1984 paper, "Novyy absolutnyy minimum temperatury vozdukh [New absolute minimum of air temperature]," *Sovetskaia antarkticheskaia ekspeditsiia Informatsionnyy biulleten*. no.105.

For decades the Vostok world record low has been one of the extremes that people

like to state for Antarctica (others being highest, windiest, most remote, and so on). The figure continues to be used widely in the popular literature, and the new EOS paper presents it without elaboration.

But. That 1984 Soviet paper about the Vostok record states, “According to theoretical calculations, air temperature in the area could fall below -90°C , but this would require prolonged absence of heat advection.”

Sure enough: Ted Scambos and others of the U.S. National Snow and Ice Data Center (NSIDC) found temperatures from -92° to -94°C (-134° to -137°F) in a 1,000-kilometer stretch on the highest section of the East Antarctic Ice Sheet. The measurements were made between 2003 and 2013 by the Moderate Resolution Imaging Spectroradiometer (MODIS) sensor on board the Aqua satellite and in 2013 by Landsat 8, a then new satellite launched by NASA and the U.S. Geological Survey.

On 10 August 2010 the MODIS measurement for the region was -93.2°C (-135.8°F). Commenting about it on 10 December 2013, the Scientific Committee on Antarctic Research noted that the 21 July 1983 Vostok measurement “was an air temperature taken a couple of meters above the surface, and the satellite figure is the ‘skin’ temperature of the ice surface itself. But the corresponding air temperature would almost certainly beat the Vostok mark.” Wikipedia’s “Lowest temperature recorded on Earth” article makes that point and says, “it is most likely that the real temperature on the [satellite-observed] site was lower than that recorded at Vostok.”

For historical continuity, the 1983 Vostok temperature remains useful.

But it’s also reasonable for us to state that Antarctica is colder. In whatever way you decide to assess the information, Antarctica is the coldest place on Earth – even though parts of it are getting warmer.

Observations from satellites, after all, are used the world over to fill in areas

where surface instruments are not present. The NOAA statement that 2016 was Earth’s warmest year on record, for example, derives from all observations including satellite ones.

Officially documenting and verifying high-temperature extremes is the business of the World Meteorological Organization Commission for Climatology (CCI). For the highest Antarctic temperatures evaluation, the CCI created an international committee of climatologists and meteorologists associated with Antarctic temperature measurements. Reflecting this, the new *EOS* paper has 15 authors from institutions in seven nations.

Citation. Skansi, M. d. L. M., et al. (2017), Evaluating highest-temperature extremes in the Antarctic, *EOS*, 98, <https://doi.org/10.1029/2017EO068325>. Published on 01 March 2017.

What makes a nation consultative?

by Guy Guthridge

The 12 nations’ representatives who signed the Antarctic Treaty in 1959 (and whose governments ratified it in 1961) included a provision for other nations to join. New adhering nations would be in one of two categories: agreeing to abide by the treaty but having no say in decisions at consultative meetings (“acceding,” as prescribed in Article XIII), or achieving “consultative” or voting status equal to the original 12 by meeting a threshold requirement.

The treaty’s Article IX sets the threshold:

“Each Contracting Party which has become a party to the present Treaty by accession under Article XIII shall be entitled to appoint representatives to participate in the meetings referred to in paragraph 1 of the present Article, during such time as that Contracting Party demonstrates its interest in Antarctica by conducting substantial

scientific research activity there, such as the establishment of a scientific station or the despatch of a scientific expedition.”

Other nations indeed have signed on to the treaty. Joining the dozen original signatories over the years, 24 nations have become acceding parties; 17 others have achieved consultative status. These 53 Antarctic Treaty nations represent two-thirds of the world’s population.

The treaty’s position as the international management mechanism for Antarctica is secure, especially so after weathering a challenge in the 1980s that the United Nations should take over. (The primary antagonist at the time, Malaysia, acceded to the treaty in 2011.)

Achieving consultative status is therefore significant. It is the one avenue enabling a nation to be a party to decisions regarding future uses of the Antarctic.

Despite the emphasis of Article IX on “substantial scientific research” as the desired admitting criterion for consultative status, the article’s dependent phrase “such as the establishment of a scientific station” sometimes has been construed as the admitting criterion, and at present all 29 consultative nations happen to operate Antarctic stations (a few on a shared basis). It was not ever thus: when the Netherlands achieved consultative status in 1990 it had no permanent Antarctic infrastructure of its own and no declared intention to establish any.

Improving the selection criteria

Then, at the 2016 Antarctic Treaty consultative meeting, an application for consultative status was not successful. Several member nations suggested that more specific selection criteria be developed, and an intersessional group was set to work.

Enter two British Antarctic Survey employees: Andrew D. Gray, Librarian, and Kevin A. Hughes, Environmental Research and Monitoring Manager. In a December

2016 paper in *Polar Research*, they examine the relationship between existing Antarctic infrastructure extent and scientific research output, figuring the metrics they’ve developed would help a nontreaty nation assess its chances and help the existing consultative parties decide whether or not to accept a new request for consultative status.

“Our study found that national investment in Antarctic infrastructure, estimated by the number of bed spaces at stations, was not a reliable indicator of scientific output.” Stated another way, their metrics introduce the awkward possibility that an existing consultative nation may not be delivering sufficient research activity to merit its ongoing consultative status.

Gray and Hughes evaluated research activity directly by identifying both numbers of Antarctic research papers published and the proportion of national scientific output these papers represented.

Here’s another surprise. “Our data,” they write, “show that, even without land-based Antarctic infrastructure, Canada, Denmark, and Switzerland may have reasonable grounds to demonstrate substantial research activity on a level comparable with existing Consultative Parties.”

Emphasizing research outputs rather than construction of Antarctic infrastructure would be beneficial, the authors argue. Stations tend to occupy scarce coastal ice-free areas, which harbor penguin rookeries and seal haul-out sites, and can affect their local environments. Especially along the northern Antarctic Peninsula, with lots of stations, humans and indigenous fauna and flora compete for ice-free ground.

Assessing the scientific element on the basis of measured outputs as explained in their paper, the authors argue, would prioritize research and would move decisions away from logistics or beds or stations as a research proxy. “This development,” they write, “would protect further the scientific values of the continent.”

Gosh: imagine the efficiency of replacing the 13 stations operated by 7 nations on Maxwell Bay, King George Island, all within 10 miles of each other, with one or two shared research facilities better than anything there now.

National pride and culture

But a counter motivator is in play. When Richard E. Byrd established quarters on the Ross Ice Shelf in 1928, he named it Little America. The name stuck; four facilities and three decades later at that location the name was still in use. Peru's Antarctic station is Machu Picchu. A Chinese one is named Great Wall. Nations export their culture and their identity to Antarctica. Brazil is building a \$100-million replacement station on Admiralty Bay for one that burned in 2012; its name is Commandante Ferraz, commemorating a Brazilian oceanographer. "Antarctic stations have become the equivalent of embassies on the ice," says Professor Anne-Marie Brady, editor-in-chief of the *Polar Journal*. "They are showcases for a nation's interests in Antarctica."

Gray and Hughes have a counter-argument: Technological changes in recent years have made development of new station infrastructure less critical for Antarctic science, which is undertaken increasingly during short visits or using offshore cruises, through data reanalysis, or using remote sensing aboard satellites, aircraft, or unmanned platforms, which require infrastructure only for ground truth verification.

The Antarctic Treaty has sustained its validity through reasonableness, management effectiveness, and inclusiveness. The paper by Gray and Hughes identifies a refreshing new way to further all three attributes.

Citation: "Demonstration of 'substantial research activity' to acquire consultative status under the Antarctic Treaty," by Andrew D. Gray & Kevin A.

Hughes, British Antarctic Survey, Natural Environment Research Council, High Cross, Madingley Road, Cambridge CB30ET, UK, *Polar Research* 2016, 35. Correspondence to: Kevin A. Hughes, kehu@bas.ac.uk.

People and books

by Paul Dalrymple

The big question we all seem to have is what we should do with our Antarctic library? We recently heard from Art Ford, and he is in a quandary as to what to do with his. I am in the same boat as Art, as I have quite a collection of Antarctic books. This past year we thought we might come up with a solution, but it fell through.

Paul-Emile Victor, the famed French polar scientist, sold his at an auction, but most of us do not have enough holdings to hold an auction. The biggest private polar library that I knew of belonged to Mary Goodwin in Los Angeles. It was fantastic, as she hocked her crystal and china to buy the rarest and best books available. Her husband was a professor at UCLA, and now her polar library rests in the UCLA library.

The best polar library within our membership that I know of belongs to our past president, Chip Lagerbom. It seems to me that those of us who want to dispose of their holdings could do a lot worse than pass them along to Chip. There is an outside possibility that the University of Maine might establish an Antarctic library. Contacts there would be either Paul Mayewski or Hal Borns. Another candidate could be the Nevada Museum of Art, which has an Antarctic emphasis (William L. Fox, Director, Center for Art + Environment, wlf@earthlink.net).

When I came off the ice after two years back in 1957, I went to Wellington where I visited with Les Quartermain. This led me to getting several first editions of Scott, Shackleton, and Mawson for less than a song and a dance (\$US 28). The prize was

an autographed gift copy of Scott's diary which Scott's widow once had passed on to Lord Corzon (then president of the Royal Geographical Society). Clearing customs in Hawaii, they tried to take them away from me, but I fought like hell, and they finally decided to let me keep them! Thank God.

Another vital part of my collection consists of cachets from all Antarctic stations during the IGY signed by station leaders. I am not personally responsible (a family friend, Mrs. Maxwell Elliott, did the leg work), but what a great collection!

Sea ice breaks a record, and a trend

Antarctic sea ice during the 2016-2017 summer season dropped to a minimum surface area not observed since the 1978-1979 season, when the satellite record began. On 1 March 2017 the sea ice occupied 801,200 square miles (2.075 million square kilometers), according to the National Snow and Ice Data Center: not even $\frac{2}{3}$ of the February mean (1981-2010) of 3.1 million square kilometers.

The big drop broke the upward trend in Antarctic summer sea ice minimum area observed since 1978. February, January, December, and November areas also have been in an upward trend over the period. But, in the 2016-2017 season, all these months broke that trend to the downside.

Antarctic maximum sea ice extent in winter also has been in an upward trend – at least since 1979 – of 0.9 percent per decade. The record maximum area came on 20 September 2014 with 20.201 million square kilometers. But 2015 was nearly as big.

Sea ice loss at the other end of the world, of course, gets the headlines. Arctic sea ice loss over the period since 1979 is three times the magnitude of the area of sea ice that Antarctica has been gaining.

Just months before this season's surprising summer minima, a January 2016 workshop in Boulder, Colorado, looked at what's driving recent Antarctic sea ice

variability. Here's a report, recently out: *Antarctic Sea Ice Variability in the Southern Ocean-Climate System*, National Academies Press (2017) <https://doi.org/10.17226/24696>.

On 4 May 2017 from 2 to 3 pm EDT a webinar briefing will describe the report and how the science has advanced since the workshop.

From wood huts to sci-fi chic

from a 13 January 2017 report by the BBC

Sprawling old McMurdo Station barely makes the cut in this BBC review of the amazing structures erected in Antarctica by some of our colleague Antarctic Treaty nations, or consortia of several of them.

What's happening, says Professor Anne-Marie Brady (University of Canterbury, New Zealand), executive editor of the *Polar Journal*, is, "Antarctic stations have become the equivalent of embassies on the Ice."

Well, that and more. "All the newest bases look good as well as do the science," she says. Princess Elisabeth station, built in 2009 by Belgium, has zero emissions. It runs on solar and wind energy and doesn't have a furnace. Dense insulation reduces heat loss to almost zero, keeping waste heat from electrical systems and human activity inside. The seasonal station is 1,500 meters above the sea at 71°57'S in Queen Maud Land.

If you're reading the newsletter in its print edition, with no pictures, this article alone might make it worth your while to hike over to the library and look at the online edition on the Antarctic Society website. The new buildings are impressive, as shown by the photos the BBC assembled.

Newest is Brazil's Comandante Ferraz, because it isn't even built yet. The old station burned in 2012. In January 2017, when your editor passed by on a ship, a Chinese cargo ship was anchored offshore, and cranes were putting up a \$100-million

station that is expected to be ready for occupancy in 2018. A Brazilian architectural firm created the design, but a Chinese company won the building contract. The futuristic design – a dark, sleek building, low and long – will be the waterfront home for up to 65 people at a time. An upper block will contain personal rooms, dining, and living space; the lower block will have laboratories and operational areas. The station is on Admiralty Bay on King George Island.

India's coastal year-round Bharati station, at 69°25'S 76°12'E, can support 47 people in the one main station and another 25 in summer camps. Dedicated in 2012, it has an "aesthetically designed living, dining, lounge, and laboratory space." A dedicated satellite channel is said to provide direct communication with India. It was built from 134 prefabricated shipping containers, for ease of transport and construction, but you'd never believe that, looking at the picture.

South Korea has a new (2014) 60-person station, Jang Bogo, on Terra Nova Bay off the Ross Sea. It's a triple-winged module on steel-reinforced blocks that has featured zero waste discharge during both construction and operation. Wind, solar, and diesel cogeneration provide power and heat.

Back to McMurdo, the U.S. "legacy" station, working nonstop, summer and winter, since 1955. It's by far Antarctica's largest and, one might reasonably argue, most capable station, housing 1,100 or so in summer and, for the 2017 winter, 210. With the world's farthest south seaport as well as airstrips and a helipad, it can put large science teams, complete with helicopters and semipermanent buildings with showers and toilets, almost anywhere in Antarctica. Review after high-level review, it's been found indispensable to the science that the U.S. Antarctic Program supports.

Poor workaday McMurdo, the butt of disparaging comments: mining town gone wrong; Desolation Junction; loading dock of

Antarctica. "We bring all our waste back from our field camps and pile it up to wait for the backload ship at McMurdo," a geologist told your editor some years back, "so Greenpeace can take pictures of how the Americans are polluting Antarctica." Those contentious days are over, but the station remains aesthetically challenged. It superbly does the job of supporting science and then some, however, and is beloved by many who toil there year after year.

McMurdo likely won't ever be "dark, sleek, low, and long," but implementing the published master plan will keep the place efficient, reliable, and safe and "a viable platform for supporting Antarctic science for the next 35 to 50 years."

Still, it's fun to envy those gorgeous new, self-contained stations that increasingly are to be found around the Antarctic. Thanks to the BBC for rounding up the pictures.

Most distinguished Antarctic, Chester Pierce

by Paul Dalrymple

There have been many, many distinguished Antarcticans. Coming to my immediate mind are the likes of Ambassador Paul Daniels, Bert Cray, Jim Zumberge, and Mary Alice McWhinnie. But one person seems to stand head and shoulders above all, Dr. Chester Middlebrook Pierce, who passed away on 23 September 2016 and whose obituary appears in the October newsletter.

His achievements at Byrd Station and at the South Pole in the 1960s may seem insignificant to many of you, but his post-Antarctic career is unequalled.

Chet was a full professor at three Harvard University facilities: medicine, education, and public health. He published over 180 books, articles, and reviews. Dr. Ezra H. Griffith summarizes Chet's career in his 1998 book *Race and Excellence: My*

Dialogue with Chester Pierce.

Chet was a professor of education and psychiatry, being the first African-American full professor at Mass General Hospital. He was a fellow of the American Academy of Arts and Sciences. He was president of the American Board of Psychiatry and Neurology and was also president of the American Orthopsychiatric Society. The Global Psychiatry Division at Harvard has been renamed the Pierce Global Psychiatry Division.

Chet was an athlete, playing both football and lacrosse at Harvard. He was an All-American at Harvard as a freshman and is legendary for being the first black to play collegiate football at an all-white southern college, playing at the University of Virginia on 11 October 1947. Virginia tried hard to dissuade Harvard from using Chet, but Harvard would not give in. In a turnaround, the University of Virginia invited Chet back in 2007 to speak at its annual symposium on race and society!

In the 1970s, Chet was a member of the National Academy's Polar Research Board and headed its biomedical panel. In those years our Society held almost monthly meetings in the Washington, D.C., area with featured speakers. I asked my good friend Bert Crary who we should get as a speaker. Without hesitation Bert replied, "Get Chester!"

So our local chapter had the honor and pleasure of having Chet speak the evening of 22 March 1979 on "A Physician's View of Antarctica." The newsletter announcement of the meeting referred to Dr. Pierce's staggering credentials, including authorship of three books and over a hundred scientific articles. "He knows more about what men are really thinking and dreaming at night," I wrote, "than their wives."

We tried for the past decade to get Chat to one of our Antarctic summer gatherings in Maine, but he has been incapacitated by cancer for many years and

could not make it. Both Gracie Machemer and I were in touch with him nearly monthly via Ma Bell. Although Gracie never met Chet face-to-face, her telephone connections with him have been priceless. Chet was a jewel, and we miss him terribly.

John Perry, 1937-2016, built South Pole dome

John Ellery Perry Jr., 79, of Fairfax, Virginia, died of natural causes at home on 1 September 2016. He spent three tours of duty in the U.S. Antarctic Program.

Commissioned in the U.S. Navy Civil Engineer Corps in November 1963, he was officer in charge of construction at Atsugi Naval Air Station in Japan from 1964 to 1967.

His first Antarctic tour was as public works officer for Naval Support Force Antarctica from 1967 to 1969; he wintered at McMurdo in 1968.

He then was officer in charge of Construction Battalion 201, Operation Deep Freeze, from 1969 to 1971; he received the Navy Commendation Medal in recognition of this service.

While assigned to the National Science Foundation, 1971-1973, he was special projects officer responsible for overseeing construction of the geodesic dome that became the central structure of South Pole Station until it was replaced by a new central station in 2008.

Later assignments included serving as officer in charge of construction at the Norfolk Naval Shipyard in Portsmouth, Virginia, 1982-1985.

Mr. Perry served 26 years in the Navy, retiring in 1988 as Commander. He then held consulting positions, including as project general manager at NASA Goddard Space Flight Center and site manager at Cape Canaveral, Florida.

Born in Willimantic, Connecticut, 16 February 1937, Mr. Perry obtained an associate degree from Wentworth Institute

and a BS in civil engineering from Northeastern University in 1963. In 1974 he earned a master's degree in civil engineering from the University of Washington. He is survived by his wife of 52 years, Marilyn (Maine) Perry.

Mr. Perry was instrumental in preserving the South Pole dome's distinctive top ring – a pentagonal shape made of aluminum with circular openings – and other parts of the innovative design at the SeaBee Museum in Port Hueneme, California.

“Over the years, I was always interested in seeing how the dome was doing,” Perry told the *Antarctic Sun* in 2011. “We hated to see the dome destroyed. Wasn't there something else that could be done?”

There was. The dome was disassembled in Antarctica with care. Each panel was documented and shipped to Port Hueneme. In July 2010, 2 weeks before the new museum was to open, Perry – along with Society member Jerry Marty and Lee Mattis, a structural engineer employed by Temcor, the manufacturer of the dome – arrived to reassemble the 600-pound top ring of the dome and hoist it into a space designed for its display. The dome will be the centerpiece of the Seabee Antarctic exhibit, along with the console from the PM-3A nuclear power plant that operated at McMurdo from 1962 to 1972.

Bob Dingle, 1920-2016, a British Australian American Antarctic

by Herbert J. G. Dartnall

Bob Dingle, who wintered at Byrd in 1962 and Plateau in 1967 and was senior Australian weather observer on USNS *Eltanin* from 1968 to 1972, died in Tasmania in September 2016.

William Robert John Dingle, born in Cornwall, England, in 1920, got his Antarctic start after migrating to Australia and, in 1950, joining the Commonwealth

Bureau of Meteorology as a trainee. January 1951 saw him on his way to Heard Island as part of the Australian National Antarctic Research Expedition, where he spent his first winter south. In the 1954 winter, Bob was sole weather observer in the party of ten that established Mawson, Australia's first continental Antarctic base. He spent the 1956 winter on Macquarie Island and the 1957 winter at Davis, Australia's second continental Antarctic station, as officer-in-charge and sole meteorological observer.

The five-man Davis 1957 wintering party did meteorology and geology, maintained an all sky camera for auroral studies, and explored the local area.

In 1959 Bob was officer-in-charge of Wilkes Station (on the Antarctic coast facing Australia) following its post-IGY transfer from U.S. to Australian operation in February 1959.

Bob's adventures began before emigrating to Australia. In the Royal Air Force Volunteer Reserve, he was a wireless operator flying four-engine Halifax bombers. By December 1943 he had flown 38 missions.

On the next mission, to Frankfurt, an engine inexplicably caught fire, and the pilot gave the order to bail out. Bob landed alone and spent the next day (21 December) in a haystack. At dusk he linked up with the Belgium resistances but on 6 January was caught by the Gestapo and spent the rest of the war a POW.

To join the U.S. Antarctic Program, in 1961 Bob was granted leave from the Bureau of Meteorology to be part of the 1962 team at Byrd Station. He observed weather for the U.S. Weather Bureau and snow drift for Melbourne University.

In 1967 at Plateau Station, one of Earth's most isolated and coldest places, he again observed weather for the US Weather Bureau and did other research for Australia.

It was a co-operative program between Australian and U.S. weather services that made Bob the senior Australian weather observer on *Eltanin*.

Board of Directors meeting, July 2016

by Joan N. Boothe

On Sunday morning 17 July, at the close of the 2016 Antarctic Gathering in Maine, the Society Board gathered in Treasurer Paul Dalrymple's dining room for our Annual Board meeting.

With President Tony Gow presiding and a quorum of Board members present, we quickly got to work, beginning with the usual, approval of the minutes of the last (2014) meeting. Then it was on to multiple topics. What follows highlights vigorous discussion at a 3-hour meeting which provided an excellent view of the state of our society and many ideas for the future.

Paul Dalrymple summed up our financial situation. The short version is that our bank balance is in good shape. The 2016 Gathering, however, despite our best hopes, was not fully covered by donations. Given a strong feeling that all members benefit from these meetings (such as by reading accounts of the presentations in this newsletter), even if they cannot make it, we voted unanimously to cover the shortfall from Society funds. (114 people, including spouses, partners, etc., attended the meeting.)

Other than the meeting, our income, largely from dues, is pretty much covering our normal, ongoing expenses.

Current membership, including honorary members, is 362, of whom 205 are still receiving a hard copy of the newsletter. That newsletter is a real attraction for our members. And now it's wonderfully archived, thanks to Tom Henderson: see the web site. As for current issues, they just keep getting better and better, thanks to the terrific job that Guy Guthridge is doing editing it.

Our Society is not a 501 (c) (3) organization. A previous board meeting had approved taking steps to obtain this status, but as of the 2016 meeting, this has not been done. We discussed at length just what is

involved in doing this, and in particular, the value of being a nonprofit and what it might enable us to do that we cannot now — making donations tax-deductible, possibly creating a scholarship fund, obtaining insurance. . . . We agreed that Bob Rutford would pursue the matter with members Bill Meserve and Rob Flint.

Where to hold the next gathering? We talked about this a great deal, as well as timing. One reason for this discussion was to consider other possible locations around the country in addition to Port Clyde.

Suggestions included Jackson Hole; Denver (NSF's Antarctic support contractor Lockheed Martin is headquartered there); and central Virginia, where director Steve Dibbern has property. No decision was reached at the Board meeting, but, as you may have read on page 2 of this issue, Port Clyde now has been set as the venue for the next Antarctic Gathering, 20-22 July 2018.

On the social media front, we've made progress, with a Facebook page, and work on a new website, which is now up and running as described by Tom Henderson in the January 2017 newsletter. Both are important for membership recruitment, especially for younger members. At the Board meeting, Tom described his efforts redoing the website, the company he's working with, scope of work, issues with the current one, etc. This was a lengthy discussion, with Tom leading the way, clearly explaining what's involved and needed. Security is a special concern, much talked about.

There were also many good ideas for future add-ons, including a proposal to develop an app for a link to the website, something that might be attractive if we want to draw younger people to the website. We agreed to pursue this idea.

As a clarification, Tony Gow, installed as president at the 2014 meeting, still has 3 years to go on his 5-year term. In the ordinary course of events, he'll be succeeded by the Society Vice President.