THE ANTARCTIC AN SOCIETY

NEWSLETTER

"BY AND FOR ALL ANTARCTICANS"

Vol. 06-07 September No. 1

PRESIDENT
Robert B. Flint, Jr.
185 Bear Gulch Road
Woodside, CA 94062
Phone: (650) 851-1532
robflint@,aya. yale.edu

VICE PRESIDENT
John Splettstoesser
P.O. Box 515, Waconia, MN 55387
Tel/fax: (952) 442-2604
spletts@usfamilv.net

TREASURER
Paul C. Dalrymple
Box 325, Port Clyde, ME 04855
Phone: (207) 372-6523
pcdal@adelphia.net

SECRETARY
J. Stephen Dibbern 5996 Via
Lane, Crozet, VA 22932 Phone:
(434) 823-8484
victoriadibbern@aol. com

Past Presidents
Dr. Carl R. Eklund 1959-61
Dr. Paul A. Siple 1961-62
Mr. Gordon D. Cartwright 1962-63
RADM David M. Tyree (Ret.) 1963-64
Mr. George R. Toney 1964-65
Mr. Morton J. Rubin 1965-66
Dr. Albert P. Crary 1966-68
Dr. Henry M. Dater 1968-70
Dr. George A. Doumani 1970-71
Dr. William J. L. Sladen 1971-73
Mr. Peter F. Bermel 1973-75
Dr. Kenneth J. Bertrand 1975-77
Mrs. Paul A. Siple 1977-78
Dr. Paul C. Dalrymple 1978-80
Dr. Meredith F. Burrill 1980-82
Dr. Mort D. Turner 1982-84
Dr. Edward P. Todd 1984-86
Mr. Robert H. T. Dodson 1986-88
Dr. Robert H. Rutford 1988-90
Mr. Guy G. Guthridge 1990-92
Dr. Polly A. Penhale 1992-94
Mr. TonyK. Meunier 1994-96
Mr. Ron Naveen 1996-98
Dr. Paul C. Dalrymple 1998-00
Ms. Kristin Larson 2000-02
Mr. John Splettstoesser 2002-04

BRASH ICE. At long last, this is the Newsletter that I have been awaiting for over several years, one in which we would have multiple contributions from the younger, active people on the ice about what is actually transpiring there. However, one of the great things about their contributions - which all must read — is that they fulfill the Antarctican Society motto, BY AND FOR ALL ANTARCTICANS.

We have been involved in putting these Newsletters together for some twenty-eight years, and, of course, there are no financial rewards, strictly a matter of love. However, there is one silver lining; we are not committed to anyone. We are not bound to the National Science Foundation, to the Byrd Polar Research Center, to the Scott Polar Research Institute, to the International Association of Antarctica Tour Operators, to Raytheon or any of the contractors. And the writers in this Newsletter have followed in our footsteps. But one premise which we live by in the back of our heads is that we should not allow the truth to get in the way of a good story. We assume that our Antarctic audience is smart enough to separate penguin feathers from their guano.

This is an exceptional time in the history of the Antarctic, as the first half of the 20th Century was one of heroic exploration in the Antarctic, then the last half of the Century saw the advent of Scientific Discovery brought on by the International Geophysical Year, the IGY. Now we are on the Threshold of another International Polar Year. In recent months I have been in contact several times with one of the very few Antarctic scientists who was on the ice when they rang the gong for the IGY to begin. Dr. Robert Benson, seismologist at the South Pole in 1957, now a space scientist at the NAS/Goddard Space Flight Center in Greenbelt, Maryland, is very much interested in preserving the Legacy of the IGY, and towards that end most of the upcoming Newsletters of our Society for the coming year will delve into that theme. Bob recently submitted a proposal to NASA entitled "Preserving video records from the IGY Amundsen-Scott South-Pole Station". It was in response to a research opportunity in the International Heliophysical Year (IHY) Program (also timed to correspond with the 50th Anniversary of the IGY) where one of the goals was "preserving the history and legacy of the IGY on its 50* anniversary." One of the main goals of Bob's proposal was to preserve his 8-mm movie of the first year, and the 16-mm movie of the second year at the Pole by DeWitt Baulch, to a digital format suitable for archiving. If his proposal is accepted, Bob will likely be contacting other members of the two IGY South-Pole years for their inputs.

This issue will include a couple of stories by yours truly on the selection and deployment of personnel going to the ice under the auspices of the IGY. As John Behrendt referred to us, we were Innocents On The Ice, but now we are part of history, some, a few, perhaps somewhat maligned, but others achieving scientific rank of note. Of those on the ice in 1957, besides Bob Benson, we have Mario Giovinetto, Arlo Landolt, Charlie Bentley, Nolan Aughenbaugh and Dick Chappell still going to a scientific office of some kind every morning. It is amazing that after

the IGY how many returned to seek higher education and fledged to professorial ranks. The IGY truly became an educational bank from which our country can now cash in dividends for the upcoming International Polar Year.

ELECTION OF OFFICERS. We had a Board of Directors Meeting this past summer, one in which we invited many of our past presidents (George Doumani, Pete Bermel, Bob Dodson, Tony Meunier, Kristin Larson, John Splettstoesser, and myself, Paul Dalrymple) to brainstorm the current status of our Society. Mainly we talked about our needs for an up-to-date set of Bylaws (in the works), the need for a Society web site (on a back burner), production of a CD with all the Society's Newsletters (a work in progress), the Ruth J. Siple Memorial Fund (on hold pending naming of the library at the South Pole), and the election of the next set of officers.

Rather than just have an approved list of candidates for election, we decided to open the nominations up to the whole Society. So if you want to run, or want to propose someone, here is your opportunity. But our Group came up with a list of suggested candidates. When Art Ford left the room to visit the refrigerator on behalf of fulfilling the thirst of his Thiel Mountains buddy, Pete Bermel, he was unanimously chosen as our candidate for Vice-President. His was the sole protest deemed out of order by the presiding president. It was suggested that our current president, Rob Flint, would stay on as Vice-President, as it appears a lot of our current business will carry on into the next term. Even though Lynn Arnold is currently teaching in Singapore, it was felt that her endearing interest in the Antarctic merited her being our secretarial candidate. Whereas we keep the Society records on mid-coastal Maine, I re-nominated myself without objection as Membership Chairman, and nominated my cohort, Grace Machemer, as treasurer. No nominations were heard from the Group for the Board of Directors.

CALENDARS: We already have a small supply of the New Zealand Hedgehog Antarctic calendars for the year 2007. So order now ($14.00 each, check made out to the Antarctican Society), and you will have them by mid-October, all ready for holiday giving. On the whole, I would say that this calendar is one of their very best, ever, and our price is right (individually from New Zealand, they would be eight dollars higher).

HOLD THE DATE! December 2, 2006, Washington, DC. The Explorers Club, Washington Group, will again host an annual dinner program at the Cosmos Club, Washington, DC. Members of the Antarctican Society are invited to join the gathering, along with members of the Society of Woman Geographers for the traditional December event. Details on the program will follow in the next Newsletter.

SUMMER PLANS IN ANTARCTICA. (Katy Jensen) Crews all over Antarctica are preparing for the start of the IPY in March, but their immediate concern is the beginning of austral summer and all the excitement and activity it brings to the Ice. As is usual this time of year, things are hopping at McMurdo Station. Winfly brought four C-17s with 330 passengers; 120,015 pounds of cargo, and 12,611 pounds of mail. Summer airlift operations will be as aggressive as ever, with various aircraft proyidingj?5 sorties between Christchurch and McMurdo. Inland flight will include 411 LC-130 sorties, 200 days of Twin Otter flights, 79 days with the BT-67 Easier, and 560 days of helicopter time.

The USCGC *Polar Sea* will provide icebreaking services again, with the Swedish icebreaker *Oden* assisting with channel maintenance, and the annual fuel tanker and cargo vessel are scheduled to arrive in late January and early February, respectively. (The recent drop in fuel prices is probably a welcome sight for many, since the June 1st Defense Energy Support Center [DESC] cost projections had tagged an extra $ 10M onto the annual fuel budget request.)

The *Nathaniel B. Palmer* will work on the Ross Sea side o1 the continent, while the *Laurence M. Gould* will continue to support science and operations on the peninsula side. Both ships are scheduled for dry dock maintenance later in the season.

Highlights include continuation of the ANDRILL project, use of the new Long Duration Balloon (LDB) facilities, and a film project led by award-winning director Werner Herzog (most recently *of Grizzly Man* fame).

Palmer Station hosts some of the longest-running science projects on the continent. These OAE grantees have returned, year after year, for decades, quietly collecting data and shaping the personality of the Palmer community. Dive into their Long Term Ecological Research (LTER) web site (http://pal.ltemet.edu) for an excellent introduction to some of the science that helps make Palmer Station the USAP's "best-kept secret."

Recent improvements at Palmer include a replacement engine in the power plant and a satellite bandwidth upgrade yielding 768 kbs (via Intelsat). The Palmer crew is currently battling high winds and heavy snow, and they are looking forward to the start of another busy summer season, beginning with the *Gould's* arrival in late September.

At the South Pole, plans for the IceCube neutrino detector array include drilling 12-14 new holes and moving the data collection system into the IceCube Lab (ICL). Conditional occupancy is also in the works for the 10-meter telescope (SPT) control room and walkway, and the telescope itself is scheduled for deployment and construction late in the austral summer. If all goes as planned, the 2007 winter crew will begin using SPT to search for dark energy in the universe. Check out Bill Spindler's excellent web site (www.southpolestation.com) for more information.

In order to support such an aggressive science schedule at the South Pole, work on the new station has been deferred except for critical activities such as upgrading the station power, adding a new water well, and correcting settlement and "envelope integrity" (heat leakage) issues.

There will be no field activity for the South Pole Traverse this year, but there *will* be a summer airdrop mission: 90,000 pounds of food and essential materials will be dropped from a low-flying C-17 *Globemaster III.* A fitting introduction to the IPY, perhaps, since the South Pole IGY Station was airdropped via *Globemaster I* fifty years ago.

UNDERBELLY OF PINE ISLAND GLACIER TO BE STUDIED. Back in 1930, Sir Hubert Wilkins, the very last of the Old Antarctic Explorers (died in 1958), bought from the US Naval Shipping Board for a grand sum of one dollar an old derelict of a submarine, the 0-12, which he later took under the ice in the Arctic in 1931. It turned out that Sir Hubert overpaid for what turned out to be near junk. Now, some seventy-five years later the US has built at a cost of more than $1.5 million an autonomous underwater vehicle stuffed to the gills with scientific instruments to go on a voyage of discovery under the Pine Island Glacier, scheduled for early 2007. This isn't the first time that an ocean-going rover has gone under Antarctic shelf ice - in 2005, AUTOSUB made a 25-km probe under the Fimbul Ice Shelf, bordering Queen Maud Land at 0° longitude. Discoveries included kilometer-wide sections of ice that were unexpectedly riven with fissures as deep as 30 meters. However, for the most part, the shelf undersurface was smooth, which wasn't surprising as an ice surface in contact with water is naturally self-leveling. The water under the Fimbul Ice Shelf was warmer and saltier than water that ship-based oceanographers sampled just off the same ice shelf.

AUTOSUB never returned from its second mission under the Fimbul, and scientists are still trying to determine what went wrong. If you are seriously looking for it, it was 6.8 meters long, less than half the length of the distance from home plate to the pitching mound (this is American baseball language), and a photo of it can be seen on the cover *of Science News,* 29 July 2006, where it is resting on the surface at the foot of a glacier in Greenland. If you see it, inform the British Antarctic Survey, who would be pleased to have it back. An underwater vehicle like AUTOSUB might also have been mistaken by a leopard seal as food, or something to mate with.

What might researchers find under the Pine Island Ice Shelf? When the Larsen-B Ice Shelf broke up in March 2005, scientists found thick mats of bacteria that were probably nourished by nutrient-rich water seeping from the seafloor. Perhaps the same can be found under the Pine Island shelf. Organisms might eke out their living on the organic material brought by ocean currents or by scavenging the occasional carcass washed from the open ocean. Stay tuned for exciting times that he ahead. It is not true that all science in Antarctica has already been discovered. There is always a better mousetrap.

Looking back 75 years, if you are looking for some thrilling reading, Sir Hubert's adventures on this subject, with his *Nautilus,* appeared in THE LAST EXPLORER, HUBERT WELKINS, by Simon Nasht, published in the U.S. by Arcade, NYC, 2006. The content includes 40 pages about this great submarine adventure, which tips the scale for exciting and suspenseful narrative as much as Shackleton's account of the *Endurance.*

Of all the famous explorers, Wilkins alone might have been the one with the most scientific curiosity. Nasht wrote "Sir Hubert's insistence on science before glory was both his most admirable quality and his greatest failing as an explorer." He had a list of 20 detailed areas of scientific investigations that he wished to have conducted on the *Nautilus,* and he also had the very best Chief Scientist that he could have possibly engaged, Professor Harald Sverdrup of Norway. Sverdrup was acknowledged as the finest oceanographer of his day, and arguably the

most influential of all time. When it came to science, Sverdrup was everything that Wilkins was not.

August 22 was a real holiday for Sverdrup, as his echo-sounding equipment indicated that the *Nautilus* had left the continental shelf and was now in the deep Arctic Basin, in 2,200 meters of water. He was thrilled because for six years he had drifted with Amundsen on the *Maud* without ever reaching the deepest ocean in the North.

Wilkins gave Sverdrup every opportunity to do his work. Together they spent many hours taking deep-sea oceanographic observations from the former torpedo room, converted into a pressurized diving chamber and laboratory. They carefully lowered a meter-long steel^ encased glass tube to the bottom to sample the undersea surface. Even in these ice-covered seas, they could watch its progress for hundreds of meters before it disappeared into the velvet black depth. These were the first records ever made of the deep polar waters and they would be just part of the rich mine of information collected on the voyage. Mud samples from the Arctic seabed and samples of strange sea creatures were of little interest to the general public, although Sverdrup had every reason to be pleased with the results. Sverdrup's reports from the expedition, which one renowned oceanographer had called a landmark in science, would later fill volumes of data, the first publications of the Woods Hole Oceanographic Institution.

The expedition was a total failure insofar as Sir Hubert's investors were concerned, and the *Nautilus* was beset with both mechanical and personnel problems from the very beginning, to say nothing of having extremely bad luck weatherwise. The navigator on the submarine was Ike Schlossbach, who later went to the Antarctic on the Second Byrd Antarctic Expedition, 1933-35, was on the U.S. Antarctic Service Expedition, 1939-41, and4heRonne Antarctic Research Expedition, 1947-48. Ike was a character of the largest magnitude, as can be read in his biography published by the Historical Society in his home town in New Jersey. The Commander of the *Nautilus,* Sloan Danenhower, was the son of the Master of the *Jeannette,* an American vessel crushed in the ice in the Arctic in 1891. All the above is history, however, and now we await great things from the new oceangoing rover. [Excerpted from *Science News,* v. 170, no. 8, July 29, 2006; and THE LAST EXPLORER, HUBERT WILKINS, by Simon Nasht, Arcade, 2006.]

SOME SLIGHTLY SHADY FIFTY YEARS' MEMORIES. (Paul Dalrymple.) Ah yes, indeed fifty years ago a bunch of us were being processed to go to 'The Ice', nearly all on our baptism trip. I don't know when I first showed an Antarctic interest, but it certainly was nurtured when I heard old Bud (BAE II) Waite give a lecture in Thomaston, Maine, back in 1936. And my files contain a letter from Admiral Richard E. Byrd, written on March 14, 1952, stating that "I will put your name on file/ And, he certainly did, as when the IGY came along, so did another letter from the Admiral. But I was only one of many in the 1950s who saw an Antarctic opportunity on the horizon with the IGY.

In the spring of 1956, the National Academy of Sciences held some sort of an evening Antarctic meeting with many distinguished guests. It was the first time that I ever heard Larry Gould speak, and, oh, was I ever impressed by his rhetoric, fantastic words flowing from his lips about Antarctica. I thought God was speaking to us. But several months later, after I had finished reading Cherry-Garrard, I realized that those words of Larry had come straight out of the pages of THE WORST JOURNEY IN THE WORLD. Later, as I learned more about Cherry-Garrard, I found out that his neighbor was a fellow by the name of George Bernard Shaw, who had a heavy hand in editing that book by his beloved neighbor. So, in reality, that night I was really listening to GBS, not Larry!

That same evening was the first showing of the new American Geographical Society's !: 6,000,000-scale map of Antarctica by their well known Chief Cartographer, William Briesemeister. The map was covered with heavy stiff brown wrapping paper as Admiral Byrd spoke. The next speaker was Admiral George Dufek, and he had a junior officer rip the brown paper off the map, with loud crackling noises. At the same time Dufek boomed out, "That is to wake you all up." And I said to myself, "You sure aren't a very nice person", and you know what, it turned out that my first impression never had to be altered as I got to know him.

I don't exactly know how I was selected to go to the Antarctic, or exactly when it all happened in the spring of 1956. Back in those days, there was never an Office of Polar Programs, per se, let alone an overlord like the National Science Foundation. There were several small offices on the 3rd and 5th floors of a building at 1145 19th St., NW where a mere handful of people like Bert Crary, George Toney, Harry Francis, Dick Hubley and secretaries like Yum Yum, Alison Wilson, Mildred and Suzanne Rodgers, and others made it all work. Nowadays it takes a full battalion in Arlington, plus a regiment in Colorado to

do the same. Some things that happened then are almost impossible to believe in today's world, such as the chief honcho in the US for the IGY, telling this stunning secretary, a former highly trained Washington debutante, how she should dress!

Fifty years ago there seemed to be an awful lot of shuffling of would-be Antarcticans to and from Washington. How these people were uncovered are unbelievable. The largest number of people going to the ice were meteorologists, and this was the only group of scientists where they had anything resembling a cadre of people from whom to select, as the U.S. Weather Bureau had a strong polar group working in the Canadian Arctic and Alaska. The discipline where there was a dearth of people was glaciology, and on-the-job-training for aspiring candidates was conducted in Greenland that summer. And you never knew until candidates passed successfully through a full day with Navy psychiatrists whether you had a real live one, as I understand from a most reliable source that the best qualified glaciologist in this country was black-balled by the head shrinks.

Many of the geophysicists were recommended to one of the many national committees by one of their professors at schools such as Columbia or Wisconsin, and these men worked out just fine. But others came from many walks in life, such as a miner in Montana who was enraptured by all the stuff in newspapers about the IGY. One name which kept appearing was William O. Field of the American Geographical Society. The miner felt that he had to go east and seek him out, so he bought a plane ticket to NYC and ran down old Bill. This man had no qualifications at all, but his enthusiasm convinced Bill that there should be a place for him on one of the traverse teams. So he was chosen as Assistant Glaciologist. Later this person became a ghost writer for some of the early-on astronauts, then he became Secretary of the Scientific Writers of America, and today he is a science writer for some of the publications of Harvard University. Bill Cromie made it BIG, and there is now a Mount Cromie in Antarctica.

Then there were those people of great self-confidence who thought that they could do anything. One such person was Peter Schoeck of Germany, a former cross country skier on the German Olympic team who came out of World War II totally frustrated because Herr Fuehrer never awarded him the Iron Cross. He wrote a personal letter to Larry Gould telling him that he wanted the most difficult job in the Antarctic. He was given a two-pronged assignment, head of the aurora program and chief glaciologist at Little America V. It was with some camp jubilation that Peter had to be evacuated back to New Zealand when he fell into a crevasse, cracked some ribs, while near Roosevelt Island. As this was the International Geophysical Year, all personnel were supposedly from one of the geophysical sciences. However, at Little America V there was a physiologist, Fred Milan from the Arctic Aeromed Laboratory in Fairbanks. Just how he crept in was sort of a miracle, although probably Kaare Rodahl, a well known polar scientist from Norway, who emigrated to Alaska, had an awful lot to do with it. But Fred (alias "Muckluck") was just a great guy, one whom we often described as the world's foremost expert on rectal temperatures of Eskimos. Later he went on to become the U.S. Head of the Health of Circumpolar People. He was one of the few of us who were overqualified. On the other hand, in the same camp, we had a middle-aged retired Marine Corps Colonel who still thought he was on active duty, even though his job sheet showed him as assistant to the ionospheric physicist.

My own story ended with a strange twist. Once upon a time I took a course in summer school at MIT in micrometeorological instrumentation, a course which I tried unsuccessfully to drop that afternoon. Insofar as I know, this was the only time that MIT ever offered this course, and it made me eligible for the position as micrometeorologist at Little America V, as NO ONE else applied for the position! It was supposed to be a two-pronged program, with a sister program being on the Chamberlin Glacier in the Brooks Range of Alaska. Micrometeorology had been conducted once before on the ice, by Dr. Gosta Liljequist of Uppsala at Maudheim on the Norwegian-British-Swedish Expedition, 1949-52, so we had some guidelines to go by. Liljequist leaned over backward being most cooperative to both of us, giving us advanced copies of his preliminary findings. I wish I could say that everything ended up peaches and cream, but, unfortunately, my counterpart in the Arctic committed suicide early on in the program, and he was never replaced. However, things took a rum for me for the better when I was invited by Paul Siple to bring the program to the South Pole for the following year, 1958.

The physical examinations for the Antarctic were all conducted by the Navy, and I took mine at the Oakland Naval Air Station, and it ran for three long days. At the very end of the exam, a doctor stuck one of those wooden paddles into my throat, choked me, and I coughed in his face. It made this Naval Captain so mad, he wrote all across the top sheet of my medical record, DISQUALIFIED. Here I was with one foot on the

gangway, all ready to go, and I was washed out. He had written below the "disqualification" that I had an ear infection. I went to see an eye-ear-nose specialist in the area, and she wrote an affidavit that I had no infections at all. I went back to the Naval Air Station and asked to see the Naval Captain who had disqualified me. They would not let me see him, but they did pass me. Phew!!!

In mid-October 1956 they assembled most of us going to the ice at Davisville, Rhode Island, for a mini-orientation and issuance of clothing. The Army, the Navy, and the Air Force all brought their clothing, and we were to pick out what we wanted to wear. People going to the South Pole were all given bright red down parkas made by Eddie Bauer, as well as down vests made by the same people. As I recall, the biggest choices were the warmer, long-legged woolen underwear or the more comfortable long-legged waffle weaves. I opted for wool. Then there was a boot selection to be made, one being the white felt bunny-type boots, the other being the large white rubber insulated boots good for extreme temperatures. I took one of each.

.Each evening we were free to leave the military barracks, and most of us found our way to a watering hole at the Kingston Inn. One evening Carl Eklund left his badge back in the room, but where Sir Hubert Wilkins wasn't going out that night, he loaned Carl his badge, which brought forth a loud exclamation from Carl "I will surely make out tonight."

As I had gone down to Davisville with several clothing experts from my home office, the Quartermaster Research and Engineering Laboratory, I went home with them after a tiring three days. Sir Hubert was in the car, and someone turned on the radio to help pass the time. All of a sudden the music was interrupted with an announcement that a Navy P2V had crashed on the runway at McMurdo. and that three were dead (a fourth was to die later). No one said much beyond a few cuss words, but I immediately thought of my small baby in a crib at home, and whether it would all be worth it. A sobering way to end our first gathering.

As many of the U.S. contingent was from abroad, they came in, one by one, to New York City. One of my colleagues was to be Dr. Herfried Hoinkes, chairman of the Meteorology and Geophysics Department at the University of Innsbruck, Austria. All he knew was that his dost in New York was to be someone by the name of William O. Field. He stopped to buy a handful of flowers to take to his hostess, then stopped, not being sure whether it would be appropriate in this country as it was back in Austria. And as he told me later, "Was I ever glad, as when I got to the Fields, there was a tremendously large bouquet at each end of the living room, plus another at the fireplace." He was completely unaware that Bill was related to the Marshall Fields in Chicago and that his wife was a Vanderbilt!

There were other interesting arrivals. One foreign-speaking arrival was able to converse hi his native tongue with the pilot, who advised this young man that he should seek out the Sloan House in NYC for his hotel, as it was run by the YMCA and would not be too costly. So he did. and when he got to the room, it not only came as recommended by the pilot, but there was a young girl who spoke the same language who had just finished cleaning the room. Following a short introduction, they found that they could very well have something of interest to each other. Fifteen minutes later, the newly arrived "Innocent on the Ice" said to himself, "Say, the USA is a most wonderful place."

And that is how it was, fifty years ago. Hope you enjoyed some long gone memories of one of the IGY people who experienced it.

MOST INTERESTING E-MAIL FROM WINTER- OVER SCIENTIST AT THE SOUTH POLE. Yes, it's dawn at South Pole. Sure, it'll be another three weeks before we have even a chance at seeing any highly-refracted sunlight, and then another week or so before we get "direct" sun, but the horizon is lit up as if it were only an hour or so before sunrise in most latitudes. The moon set for us on 11 August, and even before that it was possible to see a smear of light on the opposite horizon, hi the subsequent two weeks, the smear has brightened, broadened, and changed colors: at first it was just grey, but now there's orange at the bottom and blue above, which then merges into the still-mostly-blackness of the sky overhead. In just the last couple of days we've lost sight of the Milky Way, and, alas, the auroras are increasingly washed-out.

In July we had several periods below -100F, one of which lasted for a number of days. At South Pole this means 300-Club weather. Long-time readers will already know the drill, but for new folks, the idea is that when it hits -100F outside, you crank the sauna up (way up), to +200F or higher (higher is better), you sit in the sauna for as long as you can handle it, and then you run outside naked. Ok, yes, shoes are encouraged, and in recent years it has

become common to wear balaclavas or neck gaiters and gloves as well. To complete the experience, you run out to and around the Pole marker itself, a goal that's become much easier as the years of moving ice have carried the station closer to the Pole, and now even easier since it's about half the distance from the new station to the Pole than it was from the Dome. I've done the 300 Club each year I've been here, often multiple times, and this was no exception. On my first run I did it in purist fashion, but then I decided that if wearing a balaclava and gloves would allow me to extend my stay outside (in the same way that neoprene gloves help me last longer in the water at Palmer), that was worth a try. And indeed, it worked all too well: on my second run with the accessories I was out for about nine minutes, and I got a little bit of frost-nip on my arm as my badge of honor/stupidity. I think it was the 15 knots of wind on the way back that did me in. After that I was a little more circumspect, but I still was able to stay out long enough to become pretty fully dark-adapted, and there's nothing quite like standing outside naked at -100F while visually soaking up the stars, the Magellanic Clouds and Milky Way, and the dancing auroras.

Our extended run in triple digits was broken by a nice storm, and since then, even with the occasional blow going through (including one that gave us a 41-knot wind gust, which is at least shouting distance to Pole's all-time record of 48 knots), we've spent more time cold than not, though we've not really threatened -1 OOF again. It generally takes three things to have a decent chance: clear, calm (although, interestingly, the winds never REALLY calmed down back in July...), and low pressure, and the pressure of late has been at the upper end of "normal", from 680-700mb.

There's still time for another shot at it, as despite the growing light it really doesn't start to warm up much until the last week in September.

Now for a few words about the old and new stations, now that I've actually lived in the new one for a while, and with the buildings inside the dome being gutted, it seems that now might be the time. Most of you probably know that the old station was made up of a number of smallish buildings parked under a geodesic dome and a number of metal archways (think paper-towel tubes cut lengthwise and placed on the ground, kind of like extended Quonset huts). Think also that the new station has departed from this concept and is on big stilts, elevated above the snow surface.

So, in the spirit of optimism, let's start with what's good about the new place. Well, the bedrooms are a bit bigger, and a bit more "updated"; the old bedrooms had been remodeled to the tastes of transient inhabitants so many times that you never knew what you'd get: you might have a wonderful layout or you might find yourself sleeping on a bunk so high that you were afraid that you'd bump your nose on the ceiling-mounted smoke detector. The new rooms, while no one's idea of stylish, are at least functional — for now. The new facility has a huge (relatively speaking) gym, and while cognoscente bitterly lament the demise of volleybag, the majority of folks are thrilled to be able to shoot hoops to a basket at legal height or to play volleyball on a court of ALMOST legal dimensions. In addition to the gym, the aerobic and weight area is at least twice the size of the one in the dome. The galley is also twice as big, and includes lovely large windows that offer a fine view of the plateau in the summer time. The computer room is expansive, with enough workstations so that even in the crowded summer there's almost always one available. The new greenhouse produces significantly more green stuff than the old one ever did.

And now, in the spirit of reality, what's bad about it? I guess the simplest way of putting it would be that it's the kind of station that you'd get if you: a) gave the design contract to a firm in Honolulu, b) pretty much limited input to those who have never wintered at South Pole (and of course limited the design team to red-carpet summer visits), c) cut comers in design and materials, and d) put the magic of the USAP planning process in charge of procurement and delivery of materials, all of which is exactly what happened. It's really not a bad station for the summer, when the population is high, the VIPs are thick, and the weather is warm, but in the winter, look out. The shell of the building leaks like the proverbial sieve, leading to extreme temperature shifts inside, and just flat-out COLD temperatures on the first floor (how cold? Cold enough to freeze bathroom drains; cold enough for mops to freeze to floors and glasses of water placed on windowsills to freeze solid). The wasted space is staggering: the TWO conference rooms rarely see any action, and although I have not measured it, I wouldn't be surprised if there were more (empty) hall space in the new place than floor space in the entirety of any one of the three main buildings under the dome. The thermal regulation in the gym wing (the electronic controls of which don't really work, requiring manual intervention as outside conditions vary) is poor, and with the aerobic area placed in an elevated mezzanine over the gym, you get a cold gym and a hot aerobic area, or a warm gym and a boiling aerobic area, or a comfy aerobic

area and a frigid gym. The lovely windows in the galley must be covered up in winter to avoid stray-light impacting the sky-watching experiments, and they're covered up with big squares of cardboard cut from boxes because the "blinds" with which the windows are equipped are like cheesecloth and do nothing more than fuzz the light that passes through them. Many computer workstations were purchased to fill in the fine new computer room, but no provisions were made for spare parts or life-cycle replacement of those machines. The color scheme on the walls on the main corridors is straight out of an elementary school, with oddly-colored grids that look like the floor has leapt up to the wall (the designer actually invoked chakras in his explanation of its origin), and where the walls are white> they're a funny corrugated texture that's hard to_. clean and gives one a headache if one looks at them too long. The corridor floors themselves are already as bumpy and uneven as a 20-year-old sidewalk (something about the underflooring not really being appropriate to the loads to which it's subjected). The showers in the dome bathrooms were tiny and cramped, and the showers in the new bathrooms are tiny and cramped. C'mon, it's not like a bigger shower uses more water, nor takes up that much more floor space, and is it too much to ask to be able to turn around without banging ones elbows? (Major props to Palmer Station for the showers in the GWR remodel of 2000!) And remember the 300 Club? Well, the old sauna had a single thermostat that could be easily placed in water, allowing for continuous heating; the new sauna has both an exposed thermostat AND a secondary thermal breaker that cannot be overridden, so heating the place up to 200F is an exercise in patience: press reset, get 10-15 minutes of heating, hear breaker trip, wait 5-10 minutes, press reset, etc, etc. Of course, no one NEEDS a sauna to be 200F unless, well, unless they're trying to take part in an iconic WINTER South Pole tradition.

Oh, and that whole elevated bit? Seems that it doesn't work quite so well at preventing drifting as was planned. While it's true that there is no snow build-up UNDER the station, there's an absolutely immense windward drift that builds up in front of the station, extending many hundreds of feet out. It gets bulldozed down every summer, but because it extends so far out, the bulldozed hole fills in that much more readily the next winter. And as if that weren't bad enough, the whole station is settling, and it's doing so differentially. I gather that the compressed pad wasn't quite compressed enough, and maybe not quite evenly and, well, the place is BIG, and weighs A LOT, and gravity is stronger down here (ok, that last part, while technically true, isn't particularly relevant in this context....).

Finally, although it's not strictly something specific to the station design, a word on power. As I expect you know, electricity here comes from generators that burn the same fuel that the LC-130 cargo planes burn to get that fuel here (the heat from those generators also partially heats the station and melts ice to produce water). The very first step in the "SPSM" (South Pole Station Modernization) was the construction of a new power plant. Well, the SPSM ain't even over yet, and already we're in an energy crunch. While the new generators are indeed large enough to powei the new station and the science that existed at the time they were built, there was no foresight allotted to the possibility of additional science, and now the NSF has funded the construction of a huge (ten meter) telescope, which is planned to be erected this coming summer and operational next winter. And it needs LOTS of power to move. So there are discussions now about where to find that power, and among the options being given serious consideration are shutting down the gym, the greenhouse, and the sauna. I'll let you imagine my caustic comment at this juncture.

I think it's fair to say that (except for the thermal problems) the new place is more "comfortable" than the old, but it's disappointing that a brand new facility that will now endure for 30-40 years was designed and built with such shortcomings. And there's no doubt that the new station lacks the character of the old one. Even the name is bland: "the elevated station". Wheel Finally, although perhaps this has more to do with technology and numbers than the facility itself, there's less sense of community in the new station. In the dome there were only a few places for people to actually spend time, a couple of which were sort of "gathering spots"; now there are more places, including the now more comfortable bedrooms, and it seems like there are fewer opportunities for spontaneous interactions, which I think is a loss.

There are a number of people here who devote more time to mass communication than I do, and in this age of the "tubes of the Internet", it's the blog that's the medium of choice. For those interested in more "behind the scenes" looks at South Pole, different perspectives, and a fair number of photographs, I recommend visiting: http://jeffderosa.blogspot.com/ _____ http ://www. antarctic-adventures.de/ ....http://www.nowhere-to-go-but-up.blogspot.com/ http://www.brienbarnett.com/

Enjoy your waning heat, as I lament my passing darkness.

WILL SILVA WRITES AGAIN. Well and good to know in my head that time is short, but the feel of things gives the lie to any promises of spring. The darkness has grown long. Weekly routines are unchanging: same tasks, same reports, same meetings.... The content varies a bit, we've all worked our way through a variety of projects and will continue doing so, but it's growing monotonous. Polar toast. Cracks are starting to show in some but most are staying on a fairly even keel. Thankfully we've had neither the pitched battles between factions nor the needy and dysfunctional individual behaviors that marked last winter. Neither have we had any serious illnesses nor any injuries to amount to anything amongst our crew this winter. Easy job for me, but a boring one. Most of my work this year has involved counting things, cataloging things, organizing information, and cleaning up the fallout of the move from the old to new medical facility. Yes, it's accessary and important to do this. No, I do not find this sort of work gratifying.

A great deal has changed since my last tour here. Some of it sits well with me, but much does not. My old home in BioMed was torn down last winter, and looking into the vacant arch it used to occupy brought a hollow catch to my chest the first I saw it. Most of the other buildings under the Dome have been torn down this winter. The vacant Dome would make a good cargo yard, but they're planning to tear it down too. We have nice gear in the new medical shop, much of it acquired while we were still in the old one. Like so many areas of this grandiose and highly touted new elevated station, my shop was designed by architects and engineers who have no familiarity with life on the Ice or with the tasks the space must support. The medical shop is an awkward place to deliver primary care, and it is poorly suited to dealing with seriously ill or injured patients. Having a nice janitor closet with a mop sink, and a fairly level linoleum floor I can mop is a real plus. I'd sooner have cabinets in which to store stuff, counters on which to put the gear I need for a procedure, enough room to run a code or trauma resuscitation, and a ventilation system that didn't have the shop reeking with odors from the galley. After knocking my head a few times, I've learned to duck below the marvelous surgical lamp with its twin swing arms bearing triple-lamp heads. It seems a fitting irony that we should have a lamp designed for a large OR with a ceiling 2 feet higher than the one in our narrow space, particularly given that the prospect of actually carrying out an urgently needed surgical procedure is the elephant in the room that none save those of us on the Ice wants to talk about.

Anyway, these weeks before sunrise are among my favorite times. A night owl, I rarely see the dawn at home. Here I've many days to enjoy the growing light, fading stars, the night's deep blue merging to dim blue and to the dawn's early light as Earth tilts towards the sun. On clear days beautiful pinks and oranges line the horizon. We take Saturdays off on the first weekend of each winter month, and after last Friday's All-Hands meeting most of us dressed up for the -100F cold and lined up out by the Pole marker for a crew picture, the dawn behind us. Ahh, the life of a PoleCat! The last stars have gone from our sky. I look forward to returning to a land where skies permitting, I'll see the stars and the sun every day.

Summer was frenetic as usual, occasionally exciting and often exasperating. We had 3 shifts working around the clock on construction projects, drilling projects, and snow removal. A consequence of living in the new station: as I'm winding down and washing up before bedtime at 23:30, a bunch of duty, cold, loud construction workers are using the same bathroom to clean up before their lunch or dinner. Ugh! Medically life was easy. We had no epidemics, only a couple of brief hospitalizations, and all our medevacs walked or hobbled onto the LC-130. That's not to say we weren't served a healthy share of BS from the NSF and the Air National Guard. Checkered lot, these: we had a couple of visiting Flight Surgeons who were grossly inappropriate, whereas I thought it a privilege to entertain several others who fit my notion of officers and gentlemen. No casualties resulted from a visit by 3 Senators, 10 Representatives, and a dozen aides though a couple of Congress folk spent the afternoon horizontal, breathing oxygen in my shop. My mid-January R&R to McMurdo unexpectedly landed me in Christchurch for a couple of days after flying a critical medevac. What a time warp! Going from flat Polar whiteness to high summer in New Zealand and then back to 90 South within a few days pitched me into a wrinkle in time. Reality seemed a tad slippery briefly, but what a lark!

None too soon, the last flight left and 64 of us began to settle in for the winter. The crew includes several friends from previous tours, and our winter manager is a woman who's worked for the USAP for years and whom I've long held in high regard. I credit a relatively calm and healthy season to our key managers being on the same page about the important stuff. Certainly we've had our interpersonal conflicts and occasionally several folks get spun up about something, but compared with the crap that's gone on down here, after some years we've had it easy. A few folks tell me we've less community-mindedness this year

than last. I woman t know not having been here, but I've enjoyed a variety of group activities. A few times I've played music alone or with friends for wine-tasting parties, Scottish dances, and Mid-Winter's Feast. Oh, the banquets we've had! Our galley staff is the best I've ever seen (do I say that every tour?) and our Thanksgiving, Christmas, Sunset, and MidWinter banquets have been spectacularly good. A half-dozen of us are Friday Night Radio Darts regulars, throwing a few games of 301 talking via HF radio to a couple teams apiece from McMurdo and the Kiwis' Scott Base. We got hosed the first few weeks but then did very well for awhile. We still win now and then. We have our movie traditions: the original version of The Thing (bring out the Thermite bombs!) and the remake of it are always shown the evening after the last plane has left. The Shining makes an appearance, and it's fun heckling Icebound. No, there were no damned tennis balls!

Once again I've had fun and learned a bit teaching my MedSurg 101 course. I had two veterans of previous teams and two new folks aboard this winter. Together we worked out how to rearrange the furniture in our bowling alley of a treatment room to manage cardiac arrests and seriously ill or injured folk. We figured where best to put litter stands so as to manage two critical cases in the room, and where to put the "reds", "yellows", "greens", and "blacks" in a mass casualty scenario. At the end of the course I taught sterile technique and OR protocol (ach, the blind leading the blind you say!), and built models on which we could practice procedures for ruptured tubal pregnancy and for appendicitis. I had a couple of friends stand in as "patients" up to the point of incision so our team would have the experience of dealing with a real person as we applied monitoring equipment, pretended to place IV's and catheters, and sorted out how to keep our patient warm. It was a good experience all around. We've not had to put the team to work, fortunately, but I rest easier for knowing PA Heidi and I will have some skilled help if we need it.

I'm looking forward to coming home sometime between mid December and early January. I'll likely return to Palmer Station next September for the austral summer. Between those times I hope to visit many of you, to ski and climb with several of you, and to fly with a few of you! And I hope to have a private pilot's ticket in my pocket and a lot of good memories to take South for one last tour.

NSF awards nine grants for INTERNATIONAL POLAR YEAR education activities September 20, 2006

INFORMAL SCIENCE EDUCATION (relayed to the Newsletter by Polly Penhale, NSF/OPP)

IPY: Engaging Antarctica
Principal investigator: J. Michael Farrell, University of Nebraska-Lincoln

Polar-Palooza
Principal investigator: Geoffrey Haines-Stiles, Geoffrey Haines-Stiles Productions

Live from the Poles: A Multimedia Educational Experience
Principal investigators: Christopher Linder, Woods Hole Oceanographic Institution, and Paul Fontaine, Museum of Science Boston

Pole to Pole
Principal investigator: Moira Rankin, Soundprint Media Center, Inc

FORMAL SCIENCE EDUCATION: GRADUATE AND UNDERGRADUATE EDUCATION Adapting SENCER to the Arctic—Improving Polar Science Education as a Legacy
Principal investigator: Lawrence Duffy, University of Alaska Fairbanks

IPY-ROAM: International Polar Year Research and Education Opportunities in Antarctica for Minorities
Principal investigator: Craig Tweedie, University of Texas El Paso

Fostering Collaborative Interdisciplinary Relationships among the "New Generation" of Polar researchers Participating in the IPY
Principal Investigators: Susan Weiler, University of Colorado, Boulder, and Sheldon Drobot, University of Colorado, Boulder

FORMAL SCIENCE EDUCATION-K-12 AND CLASSROOM TEACHERS

Polar TREC-Teachers and Researchers Exploring and Collaborating
Principal Investigator: Wendy Warnick, Arctic Consortium of the U.S.

Teachers Domain—Polar Sciences
Principal, investigator: Theodore Sicker, WGBH Education Foundation