THE ANTARCTICAN SOCIETY

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ARLINGTON, VIRGINIA 22205

HONORARY PRESIDENT — AMBASSADOR PAUL C. DANIELS

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WELCOME SPRING

with

WHALE WATCHING IN THE ANTARCTIC

by

Dr. William E. Evans
Director
Hubbs-Sea World Research Institute
San Diego, California

on

Tuesday, 20 March 1984

8 PM

National Science Foundation
18th and G Streets NW
Room 543

- Light Refreshments -

Dr. William Evans is dedicated to understanding the interaction of man and the marine environment. The White House announced on 15 November 1983 the intention of the President to nominate Dr. Evans to be a member of the Marine Mammals Commission and to designate him Chairman. He is a member of the technical advisory group for the University of Guelph, studying the potential effects of oil spills on marine mammals. One of his many research programs involved the study of Gigi, the only Gray whale studied in a controlled environment. It is expected that Dr. Evans will devote part of his lecture time to tourism in Antarctica For more on Dr. Evans, see page 2.

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EXTRA ATTRACTION! An exhibit of 24 color photographs of the polar regions by Mr. Erick Chiang, USARP Field Project Manager, DPP, NSF, will be on dis- play at the meeting. Mr. Chiang has worked in both Greenland and Antarctica, having traveled to Antarctica numerous times since 1976. Come early and enjoy this superb collection of fine photographs.

Don't miss Dr. William Evans! It should be a most interesting evening - an excellent follow-up to James Barnes's presentation in January on protecting Antarctica!

SEE YOU ALL THERE!

Writing this column is a mixed bag, as it isn't always easy to get information. There are some very considerate people in our membership, mostly out-of-towners, who send us clippings when they see something of potential interest. But it's hard sometimes to find out just what is going on in Washington. This can be frustrating. The Antarctic Project seems to do a pretty good job of monitoring things which we can't hope to do, so from time to time, we will quote, as we will in this issue, from ECO, a publication with which they are allied. Again, anything in Bergy Bits is strictly unofficial relative to the Antarctican Society. Someone has to write it, and I prefer reading my own material to that of someone else who has prejudices that don't agree with mine.

UPCOMING LECTURER DISTINGUISHED NOISE SCIENTIST. Dr. William E. Evans, the Director of the Hubbs/Sea World Research Institute, is a Hoosier who found his way to the sea at a relatively young age when he was a research assistant at the Ohio State University Research Foundation conducting research on visual and voice communication, intelligibility studies, and biophysics of hearing for the U.S. Navy Voice Communications Laboratory at Pensacola, Florida. He evidently enjoyed listening to loud noises, and shortly thereafter found himself an artillery officer at Fort Knox. Then in civilian life he worked for Douglas Aircraft (1956-59) in bio-acoustics communication, noise control, and physiological effects of prolonged exposure to high level noise. In June 1960 he took his noise expertise to Lockheed Aircraft where he was Projects Leader of their Bio-acoustic group. The Navy beckoned in June 1964, and for the next fourteen years he was a civilian scientist with them studying the ability of certain marine mammals to navigate by sonar and aided in the development of aerial survey techniques. He also pioneered the use of radio telemetry in the study of whales and dolphins. Through the use of the Sea See, an underwater vehicle developed with his assistance in 1967, he initiated studies on the behavior of wild populations of pelagic (.open ocean) vertebrates.

He went to Hubbs/Sea World Research Institute in January 1977, where, as director, he is responsible for the organization of the Institute, procurement of endowments and generation of an aggressive grant procurement program, supervision of five scientists and 55 research associates, and spreading the Gospel about the Hubbs/Sea World Research Institute. He is the author of more than 60 published technical papers with topics on cetacean communication, dolphin echolocation, effects of noise on marine organisms, animal tracking and vocalization among marine mammals. He sounds, sic, to me like another Tom Poulter! Don't miss his lecture on the 20th! Let's have a full house, but please keep the noise level down!

CONDOLENCES TO THE JIM CAFFINS. David Caffin, son of Jim Caffin who is editor of Antarctic, the super publication of the New Zealand Antarctic Society, died a week before Christmas. Although Jim and his wife knew that David had only six months to live after a cancer operation, they didn't expect the end to come quite so soon. Many of our members knew David from his days in the New Zealand Embassy, 1968-72, when he was concerned with Antarctic affairs. In one way or another David's father has touched the lives of most Antarcticans who have gone through New Zealand, as he has been involved with covering Antarctic happenings since the IGY, I remember quite clearly a picture in one of those Deep Freeze yearbooks of Jim and Dave Canham

taken back in 1956 when Dave was the Navy commander at McMurdo, and both of them looked like fairly young kids. How the years roll on! The Society extends deepest sympathies to the Caffins in their tragic loss. Jim's address is 35 Chepstow Avenue, Christchurch 5, New Zealand.

MEMBERSHIP. We have 429 paid members for this year, and with this issue we are cutting off all free-loaders. Quite a few of you are sending in unsolicited checks, saying you got no bill and don't want to be delinquent. If you don't get a bill, you are paid up; if you send in an extra check, it is credited towards an extension of your membership.

EAGLE SCOUTS, HERE'S YOUR OPPORTUNITY. The Boy Scouts of America, the National Science Foundation, and the good old U.S. Coast Guard have joined together to make it possible for some Eagle Scout between 17 and 19 years of age (as of 1 June 1984), who has three years' membership in the Boy Scouts of America, to go to Antarctica during the next austral summer. Applications must be in by 1 April 1984 to Activities Service, Boy Scouts of America, 1325 Walnut Hill Lane, Irving, Texas 75062-1296. I imagine that all Scouts know about this opportunity, but if there is an interested, qualified candidate whom you know who hasn't heard about it, he should probably call (not collect) Zach Hirsch immediately at (214)659-2000 in Irving to get the necessary forms. The final group of nominees will gather in Salt Lake City on 21-23 May at the Biennial Meeting of the Boy Scouts of America. Dick Chappell, the IGY Boy Scout, will head up the selection committee. My advice to all finalists - you had jolly well convince Dick that the opportunity to go to Antarctica is the biggest and most exciting thing you have ever dreamed about. - - - Mark Leinmiller, the last Eagle Scout to go, 1978-79, has announced his intentions to go for that most difficult of life's merit badges, husbandry. I've been forewarning Mark that this can be perilous and even detrimental to one's human enjoyment of life, but in spite of my forewarnings he got engaged to Pamela over the holidays. He will ease into marriage, waiting until Frit-O-Lay reassigns him to a more permanent slot, which may give him a year for deep thinking. One of the runner-ups to Mark in 1978 was Scott Miller. Ruth and I got to know him pretty well, as he used to spend his summers at the Smithsonian. I thought he was completely dedicated to bugs, totally oblivious to girls. Then all of a sudden this lovely Santa Barbara creature with two legs showed up in Washington and they got married shortly thereafter. Mrs. Scott Miller is also a Pamela, so maybe there's something in the name which attracts Eagle Scouts. Scott and Pam have been all over the globe running down insects, and it won't be long before he gets his PhD in entomology at Harvard. I would like to do a six-years-after story on the Eagle Scouts who were finalists in 1978, as they were a group of excellent young men. And I'm sure this year's finalists will be equally impressive. Any principal investigator who might get the chosen lad as a field assistant should consider himself lucky. - - - Maybe I have written this before, but even if I have, it bears repeating. When the late Dr. Paul Siple went south as the first Eagle Scout, there was another Boy Scout aboard-- as a stowaway! (I found this out one day when I was at the National Archives perusing some of Paul's papers.) The Scout, discovered after they had been to sea several days, wanted to be the first black to go to Antarctica. Although he was a Boy Scout, he asked Paul not to tell anyone for fear they would throw him off the ship, since Paul was the official Boy Scout. But he never made it because he got into some sort of trouble on board, and was put off the ship in the Canal Zone.

IF YOU HAVE CLASS AND ARE DISCRIMINATING, WE HAVE A SUGGESTION FOR YOU. There is some really beautiful origami penguin note paper available for direct purchase from

a lady in White Stone, Virginia. There are two penguins walking across the note paper, with a body of blue water behind and in the distance something which could be assumed to be Mt. Erebus. These are available in the Smithsonian at $1.10 each, but Motoko Williams, P.O. Box 87, White Stone, Virginia 22578 (telephone 804-435-2211) will sell packages of six to members of our Society for $6.00, which includes mailing to you. We, the Society, get no kick-backs or any freebies. This is strictly something I thought you all would be interested in knowing about and procuring.

PENGUINS GALORE. If you like penguins, your attention is directed to two recent publications, National Wildlife Federation's Ranger Rick for February 1984 and National Geographic's World, March 1984. Just because they are kids' magazines, don't turn your back, on them, as there should be enough, kid in each of us to thoroughly enjoy these issues. The whole issue of Ranger Rick is on Antarctica, and a lot of it is on penguins. Its centerfold is not the usual 20th century centerfold, but a great shot of about 30 Adelies lined up on a hunk of snow at the water's edge jumping into the sea. Fantastic! The National Geographic World has two Emperor chicks on its- cover, the first two to be hatched at Sea World in San Diego. If you don't like that photo, you probably don't like your mother, baseball, or vanilla ice cream either. There are six pages devoted to Sea World's Penguin Encounter. If you don't have these magazines, the National Geographic Society is at 17th and M Streets N.W., Washington, D.C. 20036 - send $1.15 for a single issue of World if you live in the States, $1.70 if outside the States; one is supposed to be a member of Ranger Rick's Nature Club to get Ranger Rick, a membership costs $10.50. Their address is National Wildlife Federation, 8925 Leesburg Pike, Vienna, Virginia 22180.

NEW ANTARCTIC ARRIVALS. (article by Frank Todd in Hubbs/Sea World Research Institute's Currents, No. 28, January 1984)

> During November/December 1983, Scott Dreischman, Frank Twohy, and Frank Todd of Sea World, and Dr. Braulio Araya of the University of Valparaiso collected eggs of several species of Antarctic avifauna. Franz and Lydia Lazi of Stuttgart, Germany, accompanied them to film a TV special of the project, which was a joint venture between Sea World, Hubbs/Sea World Research Institute, Chilean Antarctic Institute (INACH), the University of Chile and the Chilean Air Force (FACH). Headquarters were at the Chilean Marsh Base on King George Island in the South Shetland Island group, located along the north coast of the Antarctic Peninsula. The Chilean Air Force has constructed an airstrip at the Base and C-130s fly in regularly. A field camp was established on Nelson Island, with logistic support from the helicopter squadron based at Marsh.
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> During their stay on Nelson Island the TV documentary was completed and much natural history data was compiled. A large amount of data on Weddell seals, which may form the foundation for a future H-SWRI project, was also collected. Of particular interest was a total albino Weddell pup, complete with pink skin, white fur and red eyes.
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> Their primary objective was to collect fertile eggs of Antarctic birds and transport them back to San Diego in portable self-contained field incubators. Ultimately 450 eggs of nine species were acquired — chinstrap and gentoo penguins, giant and painted petrels, kelp gulls, Antarctic terns, brown skuas, blue-eyed shags and sheathbills. Of these, as far as they know, only the gentoo penguin has ever been seen alive in North America.

The logistic problems involved in moving live birds which, require subfreezing temperatures are enormous, but transporting delicate eggs by-ship through some of the roughest waters on the planet had not been considered realistic. However, with their success in artificial hatching and subsequent handrearing of penguin eggs in San Diego in the past few years, and with aircraft support now available, the concept was felt to be feasible. If successful, transportation of live birds from the Antarctic could become obsolete.

Timing was important because there is only a very short period when the laying schedule of all species sought overlap. Indeed, the shags were hatching just as the sheathbills and skuas commenced laying (and some chicks hatched enroute). To acquire the eggs, a great deal of helicopter support was required. The skill and professionalism of the pilots they worked with, was superb and they repeatedly went out of their way to assist them with their work. In fact, the interest and help the field team received from all the base personnel was far beyond their expectation.

The eggs were successfully transported to San Diego in a Chilean Air Force 707. Since eggs are considered birds, the old penguin research, freezer at San Diego has been converted into a IKS. Department of Agriculture-approved quarantine facility. The chicks hatched en route or since arrival are being cared for by the Sea World Aviculture staff, H-SWRI volunteers and bird personnel from other zoological institutions. As of the first of this year 150 penguins - gentoos and chinstraps - have hatched and skuas were beginning to emerge from their shells. It is too early to tell at this point how successful the project will be, but the early indications are very positive. (Postscript. All the birds are fledglings now, and are being acclimated to the environment of the Penguin Encounter. Frank Todd, 1 March 1984)

GOOD NEWS AND BAD NEWS IN TUCSON. The Voice of the Antarctic, Larry Gould, tells us in his letter of February 20th that things are going better for his Peg. She had cancer of the liver, but it was highly localized and they were able to operate. A tiny patch of bone cancer was eliminated by radiation, and all of her doctors have assured Larry that she will be alright again. But there remains one small problem — Larry's cooking, which leaves something to be desired. Not only has Peg lost 25 pounds, but Larry has lost 10 pounds. However, wasn't Larry carrying around a little surplus anyway? We have heard a rumor from an impeccable source that a publisher may be reissuing Larry's famous book Cold which should please a lot of you folks who have been trying to locate a copy of this limited edition book. - - - The real bad news is that things are worsening for Hugh Odishaw of IGY fame. He not only has cancer of the lungs and liver, but a very recent bone scan showed that his bones have it too. Life can be so beautiful, yet at times it can be ever so difficult. I don't think any of us fully appreciate what we have when we are young and healthy, and able to go to a place such as Antarctica.

METEOROLOGISTS NEVER DIE. A couple of years ago we told you that a group of meteorologists in Washington thought they had finally retired Gordon (Mirny 57) Cartwright, only to have him return to Geneva and go back to work. This action confirmed an earlier Bergy Bits viewpoint that the only way to get Gordon out of Geneva would be to burn the place down. But there's another Antarctic meteorologist who makes Gordon look like a neophyte — he's Henry (BAE I) Harrison who has devoted over 60 years to meteorology. A lot of people in our midwest who experienced the Siberian Express in December probably think that Henry's years haven't done much to improve their lives, but the American Meteorological Society isn't of that bent. On 20 December 1983, they announced that Henry would receive their Special Award for 1984. These awards are made to individuals or organizations who have made important contributions to the

science or practice of meteorology or to the Society. Henry will receive his award "for his distinguished service over 60 years, from Kite Station observer to leader in the evolution of aeronautical meteorology, and his key role in founding the Society's Certified Consulting Meteorologists program, being CCM Number One. His many contributions to aviation safety and operating efficiency include research that advanced the widespread and effective use of airborne weather avoidance radar."

Henry hasn't exactly been an unsung hero for all these years, as he was the recipient of the American Institute of Aeronautics and Astronautics' Losey Award (1935), the American Meteorological Society's Award for Applied Meteorology (1960), the Flight Safety Award (I960), the Front Range Squadron Award, the W. A. Patterson Award (by United Airlines) in 1966, the Edgar S. Correll Award of the Air Transport Association (1972), and the University Recognition Medal by the University of Colorado (1958). And, naturally, he received the Congressional Medal for Polar Exploration for being on the Byrd Antarctic Expedition, 1928-30.

Henry's career began with the U.S. Weather Bureau (USWB) as an observer at the USWB Kite Station in Due West, South Carolina. In 1928 he became an Airway Forecaster at the New York Air Mail Terminal at Hadley Field, New Jersey. After being on the Byrd Antarctic Expedition to Little America in 1928-30 he returned to the U.S. to serve as an Airway Forecaster for the USWB in Cleveland. In 1935 Henry joined United Airlines as a flight dispatcher. During World War II, serving in the USAF, he handled such important assignments as Chief of Staff Weather Officer for the Yalta Conference and head of the Far East Air Force Weather Service. Returning to United Airlines after the war, he was named Manager of Weather Service (1948) and Director of Meteorology in 1956.

In his 33 years with United Airlines, Mr. Harrison's contributions to aviation meteorology are widely acknowledged in the field. He wrote many papers and developed research on such subjects as prefrontal squall lines, upper air phenomena and multiple route flying, which paved the way for successful operation of commercial jet aircraft. He did work in developing airborne weather radar and forecasting of hail storms. He became the recognized authority on mountain wave effect, which causes turbulence near mountains; he has done important research into clear air turbulence and its relation to the high altitude jet stream. His study of fog dispersal through aerial seeding has also commanded much attention. (He enjoys a well merited reputation as a keen student of the game of our National Pastime, baseball. Ed. note)

JOHN ANNEXSTAD FINALLY MAKES IT. It took old John Annexstad only twenty-five years after his IGY wintering-over experiences at Byrd in 1958 to come up with his PhD union card. However, his study on meteorites was the very first Antarctic meteorite doctoral dissertation (Meteorite Concentrations and Glaciological Parameters in the Allan Hills Icefield, Victoria Land, Antarctica) ever done. His major professor was Ludolf Schultz of the Max Planck Institute fur Chemie at the University of Mainz, a veteran of three Antarctic meteorite sojourns. John himself spent five field seasons tracking down the elusive specimens, so it's obvious that meteorite degrees come at a cost. On the other hand, John had a pretty good deal going, and one shouldn't kill a golden goose before its day. After all, hasn't Phil Kyle sort of demonstrated that Mt. Erebus is-Forever? John wrote that he thought he would never finish the degree, and lived in constant fear that he'd end up being the oldest person to ever finish a degree. But he discovered that our illustrious president, Mort Turner, didn't get his degree until he was 52, and this gave John impetus to finish it before he became that old, which he did. John's academic degrees are really polarized, as his master's earned at the University of Alaska (under Antarctican Bucky Wilson) was on upper atmospheric physics (Macquarie Island and Kotzebue) and conjugate point

micropulsations. Thank, heavens old John got his PhD degree; otherwise, he might have been reduced to being just the answer to another trivia question — who was the first grizzly old American Antarctican to take his daughter to the ice as a field assistant? That daughter, Kris, is presently serving a one-year preceptor-ship as the junior-junior member of a Philadelphia architectural firm called "Friday." I presume by its name they work only on Friday, doing one week's work on that day. Anyway, work doesn't seem to interfere too much with Kris's athletic pursuits where she still excels in everything she does. Readers of this column may recall that she had an athletic scholarship at Rice, having been fortunate enough to have inherited her mother's athletic abilities. Had it been the other way around, she might have been a tenured graduate student!

ANTARCTICA CAN BE BOUGHT. If you've got the money, you can get there. That was proven when eight business men/adventurers, members of the Seven Summits organization, chartered a modified DC-3 to transport them to Antarctica so they could climb Vinson Massif, the 16,864' erection standing in the Sentinel Ranges. These guys must coin money, as they attempted to climb the highest mountains on all seven continents in 1983 (McKinley, 20,320', North America; Elbrus, 18,510', Europe; Kilimanjaro, 19,340', Africa; Aconcagua, 23,081', South America; Kosciusko, 7,328', Australia; and Everest, 29,028', Asia were the other six). I think it was poetic justice that Everest rebuked them some 3,000 feet from its summit. They chartered the plane from the Polar Research Laboratory in Santa Barbara. Manor Buck of PRL said their plane was the only one that could get their number of people and equipment to the mountain. The plane is equipped with three turboprop engines, giving it much more power than the original DC-3, has a fuel capacity of 1,900 gallons, and a range of 1,700 miles. Piloting the plane was veteran polar pilot Giles Kershaw, whose name sort of rings a Trans-Globe bell. They had to have a sponsor, and found one in Chile! The Chilean air force supplied the fuel and a base of operations at Punta Arenas. They were able to land on a glacier about three miles from Vinson Massif. Having some extra pocket change left after chartering the plane and its crew, they hired Yuichiro Miura, the Japanese photographer who skied down Everest and lived to tell about it in a movie. There will be a heart-rendering movie film produced on their great adventure, which probably will be released in Japan. Let's hope it stays there! I think the Navy should dust off Que Sera Sera and bring her back, as she was a good old DC-3 who did her all for science. But if millionaires who don't know what to do with their time can buy their way there, won't Antarctica soon become the playground of the ultra-wealthy jet set????

THE BRITONS ARE AT IT AGAIN. Nine British servicemen and scientists are going to winter over on Brabant Island off the Antarctic Peninsula. This isn't news in itself, but they want to do it the hard way, the British way, camping out with only tents and snow huts. It really won't be that big a deal, as the island is north of the Antarctic Circle, and haven't Eskimos and the Lapps been doing the same thing for centuries in a colder environment? The men represent the Royal Air Force, Navy, and Marines, and I imagine it will be a lot safer there than in Lebanon. They plan to survive on wild game, and supplies that arrive by plane (which could make it all quite palatable). The island is a good size, being 50 miles long, and planes have landed there. However, it's a virginal island with no record of either exploration or settlement. The British seem to get an inordinate amount of pleasure out of doing things the hard way, something which must have been instinctively willed by Scott to all future U.K. Antarcticans.

SHACKLETON STAGES A COMEBACK — OF SORTS. Sir Ernest Shackleton had always enjoyed the enviable reputation of being the best man to go south with, and presumably

he merited being The People's Choice. I used to hear a little bit about Sir Ernest from a former colleague of mine, the late Sir Hubert Wilkins, who, you may recall, was going south, with Shackletdn as his scientific leader when Sir Ernest died in South Georgia in 1922. Now our British friends have come up with a four-part, four-hour documentary on Shackleton. It was shown on TV in Canada in November, and received great reviews. Someone by the name of David Schofield plays Shackleton, and the Toronto Star said he gave a compelling performance, whatever a compelling performance may be. The documentary writer, Christopher Railing, was given credit for converting Shackleton's past into "an appealing blend of self-delusion and hard reality." The review said, in part, "we are treated to the sight of several artfully selected warts. For example, Scott comes in for a revisionist overhaul, portrayed here as an envious and mean-spirited glory-seeker. Headed by a bunch of shuffling pettifoggers, the Royal Geographical Society fares no better. Accurate or not, these charges gain a certain conviction solely on the strength of the visual surroundings. Indeed, from Siberian ponies dying in the harness to pocked foreheads burnished by the cold, each episode is a veritable motherlode of vivid period detail." I hope this series eventually makes it on our PBS.

FOREIGN AID PROGRAM STILL WORKING. The Soviet's fishing trawler, MYS DALNIY, came into McMurdo Sound on 20 February with a 33 year old woman suffering from internal bleeding. They stayed offshore two miles, sending ashore a tender with a party of three. The weather had reduced visibility to a half mile, so they didn't want to bring the trawler into dock's side (or could it have been the catch they had in their holds?). Doctors at McMurdo provided minor surgical assistance which was successful, and shortly thereafter the MYS DALNIY steamed out of McMurdo Sound. (Courtesy of Guy Guthridge)

U. S. ANTARCTIC BED COUNT. McMurdo and the South Pole are already in their wintertime posture. There are 81 souls at McMurdo (four scientists, twelve civilian support, and 65 Navy support personnel). The South Pole totals 19 (seven scientists, twelve civilian support). Siple is closed for 1984-85, but will reopen in late 1985. The HERO leaves Palmer in early April, leaving behind two scientists, seven supporting civilians and a lone Navy person. (Courtesy of Guy)

CHRISTCHURCH'S DISPLAY DAY BIG HIT. Christchurch International Airport, on the South Island of New Zealand, drew an estimated 25,000 to 35,000 visitors on Sunday, the 19th of February for a "display day" that featured U.S. and New Zealand exhibits from Antarctica. The major drawing card was a USAF C-5B Galaxy, a big airplane which is not used in the Antarctic. Thousands of people were attracted to the U.S. Antarctic Program's ski-equipped LC-130 airplanes and a UH-lN helicopter freshly arrived from McMurdo Station. Three 40- x 120-foot white nylon tents, rented for the occasion, contained displays of U.S. and N.Z. Antarctic logistics, weather forecasting, stations, ships, land transportation, tent camps, snowcraft, and research results. At peak periods during the day, visitors stood three and four deep viewing the exhibits and the tents. The mayor of Christchurch said the event enjoyed one of the largest turnouts in the city's history. The special day commemorated U.S. and N.Z. cooperation in Antarctica and both countries' extensive use of the airport as an Antarctic gateway. (Courtesy of Guy) (Ed. note. We understand there is some consideration being given to the possibility of a mini-display like the one in Christchurch being put together for a U.S. tour.)

WIND CHILL - MUCH ABUSED, POORLY UNDERSTOOD, WIDELY MISUSED. Andy Rooney should stick to Christinas necktie stories, as his syndicated column in early January on

"The Wind Chill Factor" was a bomb. It epitomized the public lack of knowledge about the derivation of wind chill. He quoted a National Weather Service employee in New York City as saying, "It was invented by Admiral Peary at the North Pole years ago." Former national TV weather forecaster, Gordon Barnes, told his Washington audience last year that it was a product of a doctor in the U.K. Typical Barnes. But the real professional meteorologists are well aware that it was conceived in Antarctica and was the offspring of the late Dr. Paul A. Siple, a former president of our Society, and Charles Passel, current member of our Society. Their field testing was conducted on the U.S. Antarctic Service Expedition, 1939-41, when they carried out eighty-nine experiments on the rate of freezing water in plastic containers (15 cm long, 6 cm diameter). They fitted their data to an empirical equation which yielded a value of heat loss expressed as kilogram calories per square meter per hour, and the results of their work appeared in the Proceedings of the American Philosophical Society in 1945. Dr. Siple was the Army's foremost authority on cold weather clothing, patented many items, and was involved in the design and development of the vapor barrier boot which many of you have worn in the Antarctic. Siple's work on clothing zones which appeared in military almanacs was a practical application of the utilization of wind chill. Global maps have been produced by the military showing isopleths of wind chill in kilogram calories per square meter per hour.

But that is all history. Nowadays wind chill has evolved into a wind chill equivalent temperature (WCET), still utilizing the equations of Siple-Passel. Its popularity is based on its' "catchiness" and its simplicity - computations require only current ambient air temperature and wind speed. For some peculiar reason, people seem to get an inordinate amount of pleasure in knowing how cold it is or how hot it is, probably because it gives them an excuse for doing less work and a topic which they can discuss with their nearest neighbor — inside of each of us is a little bit of forecasting skill which we all like to practice. When it's -20°F with a 25 knot wind, the WCET is -75°F. Now that's much better to talk about than just a temperature of -20°F! So I say unto you all, wind chill for evermore will be an equivalent temperature, not a value of heat loss per se.

Thanks to Paul F. Krause, geographer at the Engineer Topographic Laboratories at Ft. Belvoir, who has done some remarkable things on the computer relative to environmental effects, we are presenting a new nomogram (based on the Siple-Passel equation) which you can use to find out how cold you will feel when the next Siberian Express goes through your neighborhood (see page 10). The wind chill equivalent temperatures are across the bottom, the wind speeds are on the left, and the air temperatures are the heavier, darker curved lines. Follow your wind speed over to the temperature curve, then drop on down to the X-ordinate, and there's your WCET. We haven't seen a nomogram just like this one, although there are variations showing the wind chill in kilogram calories per square meter per hour. One thing quite obvious is that the WCET is very sensitive to increases in low winds, whereas there is little change after wind speeds reach 40 knots.

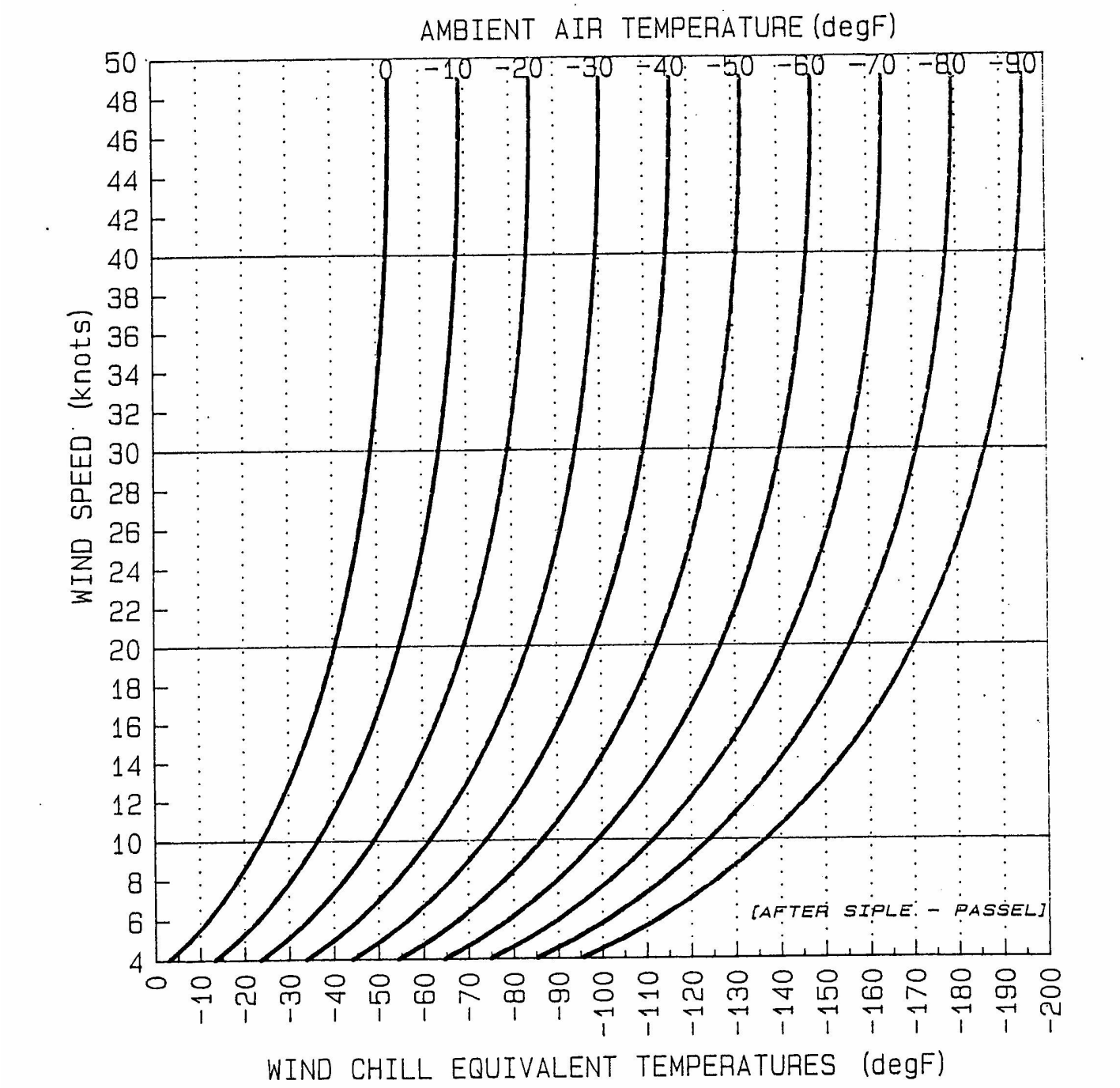
Unless you were in Eastern Siberia (or had your head buried in the sand) in December, you know that our midwestern states had a real blast of Arctic air just prior to Christmas. We computed hourly WCETs for 17 U.S. stations, including three Alaskan stations, for an 11-day period, 16-25 December 1983. Here are the minimum WCET values obtained:

Williston, N.D.	-89.3°F	Glasgow, Mont.	-76.4°F	Milwaukee, Wis.	-70.2
Bismarck, N.D.	-79.9	Scottsbluff, Neb.	-75.0	Chicago (Midway)	-70.2
Miles City, Mont.	-79.9	Norfolk, Neb.	-73.0	Casper, Wy.	-65.2
Chicago (O'Hare)	-79.4	Fargo, N.D.	-72.0	Internat'l Falls, Minn.	-61.8
Minneapolis/St. Paul	-76.3	Duluth, Minn.	-71.4		

Now let' go to Alaska:

Barrow	-52.4°F	(but only	-28.8°F	for	9-day	period,	18-26	December).
Fairbanks	-40.5	("	"	-11.0	"	"	"	"}
Anchorage	-9.9	("	"	+ 4.2	"	"	"	")

On 23-24 December, when the wind chill equivalent temperatures were the lowest in the lower 48 states, the minimum WCET values for the three Alaskan stations were Barrow, -13.8°F; Fairbanks, -11.0°F; Anchorage, +5.0°F — 60 to 70 degrees warmer WCETs in Alaska! Wow!



We don't have hourly data from the Antarctic yet, although we hope to get them later, but we do know that Doc Abbot, the old Deep Freeze commander who lives in Mobile, was shivering at a -21.2°F WCET on the day before Christmas when he was trying to start one of his Cadillacs, while McMurdo, on the same day, had a +20.2°F WCET. How about that!

If anyone is still reading, here are some other stats which might surprise you. Williston, North Dakota, had ten consecutive hours with an average WCET of -84.6°F; had a 24-hour period when the WCET averaged -75.1°F; had two consecutive days when their WCET was -70.0°F or below. We hear a lot about International Falls, but all they have is a better Chamber of Commerce. The really bad place is actually Williston, but no one knows where Williston is, so they never mention it. Bronko Nagurski put International Falls on the map fifty years ago, so everyone knows about it. Another terrible place is Duluth, and according to US News & World Report, a lot of people who enjoy feeling miserable go there in midwinter. There were four cities with 10-day averages (16-25 December) which had mean WCETs of -40.0°F or below: Williston the coldest, -45.8°F; Duluth the next coldest, -41.4°F, and Glasgow, Montana and Bismarck, North Dakota. Chicago gets a lot of publicity because a lot of TV cameramen there like to go down to the waterfront and get shots of surf pounding over the road, but it isn't all bad there — 10-day average WCET of only -27.5°F. The moral of this whole story is to stay out of Williston, even if you could find it. Has anyone actually been there in winter?

SUMMARY REPORT ON THE ANTARCTIC MINERALS MEETING, WASHINGTON DC, 18-27 JANUARY 1984. (From 6 February 1984 report by ASOC - Antarctic and Southern Ocean Coalition - on Antarctic Minerals Meeting).

The sixteen Antarctic Treaty Consultative Parties (ATCPs) met in Washington DC, 18-27 January to continue their formal negotiations for an Antarctic minerals regime. They had previously met three times in this series of negotiations, in Wellington, New Zealand (June 1982 and January 1983) and Bonn, Federal Republic of Germany (July 1983). At the earlier sessions only 14 nations were represented. The two additions were Brazil and India, who became full "Consultative" members of the Treaty at the XII Consultative Meeting held in Canberra, September 1983.

The governments completed a "second reading" of the draft minerals treaty prepared last year by Chris Beeby, head of the New Zealand delegation. Beeby continued to chair the "Working Group" (as the governments call their mineral meetings). But not enough progress was made to allow a new draft to be prepared. Many new proposals were put forward both in draft treaty language and in the form of "non-papers" (which do not contain the usual numbering system for official documents in an international negotiation and apparently have no "official" status). It is expected that Beeby will prepare a comprehensive "Chairman's Report" which covers all significant proposals for modifications to the draft regime. This will not be a public document.

The sixteen ATCP governments will probably meet again in Tokyo from May 21-31, 1984. The twelve "acceding" members of the Antarctic Treaty (those whose scientific programs are not sufficient to give them full voting status) will be invited for the first time to send representatives to a minerals meeting, although they will not be allowed to participate as "observers". The important Environmental Contact Group (chaired by Dr. John Heap of the UK) will be convened in Tokyo.

It is expected that Beeby will prepare a new draft minerals treaty at the conclusion of the Tokyo meeting. A further negotiating session is set tentatively for Brazil in January 1985.

Non-governmental environmental organizations monitored the minerals negotiation, as they have for the last several years. Like all previous Antarctic minerals negotiations the Washington minerals meeting was held behind closed doors. NGOs thus had to use "informal" methods of learning what was happening in the meeting.

SOME INTERESTING OBSERVATIONS BY A BIOLOGIST. Charlie (South Pole 58) Greene has incorporated himself into Greeneridge Sciences, Inc. out there in Santa Barbara. Evidently he will be doing the same things: he did at the Polar Research Laboratory, but will have more dollar bills pass through, his hands. When we wintered over together, I had sort of picked him out as one who would become a college professor, not one to get all wrapped up in sounds of Arctic watered whales. Recently he sent us an interesting clipping out of the PIO of the University of Southern California at Santa Barbara about some observations of Bruce Robison of their Marine Science Institute who does biological research at Palmer. One was relative to how clear the atmosphere was at Palmer - when they had good weather - saying it was "like walking around with binoculars on." And he went on to comment on the sunlight filtering through the icebergs producing a glowing blue which had no match in the color chart, calling it "ethereal blue." - - - I'm rather ignorant about most things in life, so it doesn't take much to amaze me, but I never realized before that krill come in such numbers that research vessels are forced to turn on their echo sounders to avoid hitting their massed layers with nets. It seems they occur in such numbers that they can burst trawl nets, leaving the biologists with an all-day mending job in freezing weather on a heaving deck. How about this! Robison determines the age of krill by counting the annual rings in its earbone! And I like this quote from Robison, although I think I have heard it somewhere before - "If I knew I would never see Antarctica again, I would be very disappointed." This fellow Robison either has a way with words or else he has a great public information officer in Bob English!

WHO HAS SEEN REAL WIND CHILL? Elsewhere in this Newsletter there are a couple of paragraphs on wind chill. There are no stats on which, meteorological station in the world holds the record for the lowest wind chill equivalent temperature (WCET). And if there were stats, they would be non-representative because a peculiar thing happens, when winds are greater than 50 knots - the wind chill values start to increase (get warmer). So there is no valid way to come up with realistic values for a place like Mt. Washington, New Hampshire where winds over 50 knots are experienced frequently in winter. That station was established during the 2nd Polar Year, and the first winter they had a temperature of -50°F with a wind speed of 100 knots. That must be about as bad as it comes. Certainly far worse than at Vostok, even with their extremely low minimum temperatures, because temperatures below -125°F can only occur with calm conditions, so their WCETs would be the same as their ambient temperatures. It is quite possible to have a temperature at the South Pole of -80°F with, a wind speed of 20 knots, resulting in a WCET of -155.6°F. If I were to make a guesstimation of how low a WCET could go, I would say about -190°F — a temperature of -90°F with a wind speed of 30 knots would result in a value of -186.2°F Possible??? We have a couple of expert armchair meteorologists in our group, NOAA's J. Murray Mitchell (with polar experience in the Arctic when he was in the service), and NCAR's Will Kellogg; it would be interesting to get their comments, on this possibility. Rudi Honkala has experienced more wind chill than anyone in our Society, as he spent five winters on top of Mt. Washington, one winter on windy St. Lawrence Island in the Bering Sea, and three Antarctic winters, two on Wilkes Coast which experiences some pretty strong katabatic winds. If anyone knows how miserable it can get, Rudi is the person. I guess those of us who haven't crawled on our hands and

knees across the tundra of Home Stretch on Mt. Washington in midwinter haven't really lived. Until someone can convince me otherwise, I would vote for Mt. Washington as the station with the worst wind chill.

MOUNT SIPLE. As the Newsletter was being prepared, word was received that the POLAR SEA had reached Mt. Siple. Volcanologists, petrologists, glacial geologists, geodesists, and geophysicists were put ashore or flown in the vicinity by helicopter from the POLAR SEA. Dr. Wesley LeMasurier, University of Colorado at Denver, is a volcanologist/petrologist, who will determine whether Mt. Siple is a volcano, as has been assumed since its discovery. Dr. LeMasurier will search, for evidence of volcanic rocks that show evidence of having been erupted under water. Volcanic rocks of this type may help indicate periods of volcanic activity at times of higher glacial levels. He will also be interested in (1) whether it is active or not, (2) the ages of exposed rocks, and (3) whether it is part of the Mt. Erebus volcanic province or part of the Marie Byrd Land volcanic province. Dr. Philip Kyle has two graduate students aboard who will take rock samples for detailed geochemical analyses, including isotopic ratios of critical elements. Dr. George Denton, University of Maine, and a soils specialist who is working with him, will determine if higher-level glaciations have affected Mt. Siple in the past. Drs. Zeller and Dreschhoff, University of Kansas, are prepared to fly with a scintellation counter that will detect and record the relative amounts of uranium, thorium, and potassium in the exposed rocks of the area. These data will be combined with data from prior surveys in other parts of Marie Byrd Land, to map broad trends in the presence of these elements in Marie Byrd Land. The U.S. Geological Survey has two topographic engineers on the POLAR SEA who placed geoceivers on terrestrial points that are recognizable on aerial photos. The geoceivers determine location by latitude, longitude, and elevation to within a few meters by readings on passing navigation satellites. Preliminary location determinations by this group indicated that Mt. Siple is over 60 kilometers from its position on existing maps.

Messages received in the Division of Polar Programs, NSF, on 1 March verified that Mt. Siple is a volcano. Scientists were on Mt. Siple for four days. An ornithologist found a colony of Adelie penguins, approximately 2,000 pairs, on Lovill Bluff. Mt. Siple, on maps, is 15 miles north, 13 miles east of the actual position, it was determined. A writer/historian, Mr. Parfit, is recording the expedition's trip which will be published later on.

This is the first time that Mt. Siple has ever been visited by anyone. The results of even such a short investigation are expected to add significantly to our scientific knowledge of a major part of Marie Byrd Land.

SECOND SEYMOUR ISLAND (JAMES ROSS ISLAND BASIN) EXPEDITION. The second Seymour Island Expedition, again planned and organized by Dr. William Zinsmeister (now of Purdue University), was put in and supported by the U.S. Coast Guard Icebreaker WESTWIND. The WESTWIND left Punta Arenas, Chile, on 10 December 1983 with 14 scientists on board. Mort Turner was assigned by the National Science Foundation to be Chief Scientist and National Science Foundation Representative. The WESTWIND had a smooth crossing of the Drake Passage. The scientists and their field camps were placed on Seymour Island by 17 December. Three tent camps were established. The main camp, Buckeye, with the Kent State University group, emphasized fossil mollusks, echinoids, crustaceans, mammals, and birds of both Cretaceous and Tertiary ages. Another camp, Albatross, with the Ohio State University and Colorado School of Mines scientists, studied Cretaceous-age microfossils, ammonites, and plant spores. The third camp, Calcutta, was for the Texas Tech scientists, who were collecting Cretaceous-age marine reptiles and birds.

Late on 27 December, the WESTWIND started south for purposes of personnel training and science reconnaissance if the opportunities became available. An extensive survey of the stratigraphy and collection of fossil pollens from Cretaceous sediments was carried out on the east end of Robertson Island by the Colorado School of Mines group and the NSF Representative. On 30 December the ship went south of the Antarctic Circle and then returned northward, through heavy sea ice, to the Jason Peninsula. There a very brief helicopter reconnaissance did not find reported Cretaceous sediments, but did identify a large volcanic collapse caldera. After leaving the Jason Peninsula, the WESTWIND continued to follow discontinuous leads northward through heavy pack ice, generally keeping several kilometers off the Larsen Ice Shelf.

Shortly after noon on New Years Day the WESTWIND was beset while it was between 1 and 2 kilometers from the face of the Larsen Ice Shelf. The ice holding the ship began to move rapidly westward, toward the shelf. By 4 p.m. the WESTWIND was immediately adjacent to the vertical face of the shelf, with the pack ice pushing hard against the ship and the shelf. The ship was heeling to starboard about 17°. The crew, with all available hoses, was lubricating the sides of the ship with sea water to attempt to bring it back to trim. The WESTWIND, riding in a mass of brash ice, shifted until it listed about 5° to port. In this position it was dragged forward along the front of the ice shelf, where a minor projection broke ship frames and ruptured the hull for 40 meters. Because of the port list, the ruptures were all above the water line. All the crew went into life jackets. Crew not on duty and passengers were assembled on the boat deck with survival gear. There was no panic in the crew and the entire emergency was very well handled.

About half an hour after the damage started, the direction of movement of the ice changed and the WESTWIND was carried away from the shelf, and ice pressure let up somewhat. For three and a half days after the accident, the ship pushed very slowly through, nearly-solid, thick ice, further hampered by the loss of much of a blade from one propeller and by having the rudder stuck to one side. The WESTWIND broke out into relatively open water .on the afternoon of 4 January and was again in contact with the scientists on Seymour Island by helicopter on 5 and 6 January. The field camps were backloaded to the WESTWIND, and all field research ended about noon on the 6th. By the early morning of 8 January the ship was at anchor in the harbor at the west end of King George Island, off the Chilean Frei and Marsh Bases and the Soviet Bellingshausen Station.

Two U.S. Coast Guard C-130s- arrived at Punta Arenas, Chile, on 10 January with heavy loads of steel plates and rubber matting for patching the WESTWIND. These were relayed to Marsh Base by the C-130s in several flights, starting on 11 January. All of the U.S. scientists of the second Seymour Island Expedition were taken north to Punta Areans by the first return C-130's flight.

Patching the ship went remarkably rapidly, with the WESTWIND leaving for Punta Arenas on 19 January, and headed ultimately for its home port of Mobile, Alabama, and a lengthy yard period for permanent repair.

Despite problems with helicopters, weather, and ice damage, the scientists of the Seymour Island Expedition accomplished a great deal. Announcements of specific discoveries will have to wait for the arrival of samples presently on the WESTWIND, and laboratory study of the fossils. However, the findings of the first expedition and preliminary statements on the fossils recovered during the second expedition, indicate that Seymour Island and surrounding areas of the James Ross Sedimentary Basin will be a world-class paleontological resource, worthy of many seasons of future field research.

BILL FIELD. Father of Alaskan Glaciers Termini, whose great-great grandfather was Commodore Cornelius Vanderbilt, turned 80 in October. He's surging!