The Antarctican Society

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"BY AND FOR ALL ANTARCTICANS"
Post Office Box 325, Port Clyde, Maine 04855
www.antarctican.org
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ANCHOR AWEIGH

Now in my third season lecturing on an Antarctic cruise ship, I realize the difficulty in helping passengers understand the difference between land ice and sea ice. We pass an iceberg higher than the bridge deck. A passenger asks, "Since it is flat on top, does that mean it is sea ice?"

A lecture with slides, "Antarctic Ice 101," explains it all, I want to think. On the stage of the ship's 500-seat theater, we put water and ice cubes in a large bowl and call it the Southern Ocean with sea ice: no change in sea level as the cubes melt. We noisily add more ice cubes—simulating calving bergs—to raise sea level. More theater: as the ship passes real-life examples, our commentary from the bridge drills home appreciation of what's a berg, a bergy bit, sea ice, fast ice. After days south of 60°S I watch the satisfaction of understanding unfold on the faces of passengers who were strangers, now are acquaintances, and are about to be gone from my life forever.

They go home, tell others. Steve in Michigan isn't one. Diane Rehm, a public-radio interviewer with a national audience, recently hosted two of the world's top glaciologists. Eric Rignot and Richard Alley described the revolution in understanding of ice sheet dynamics and newly measured rates of land ice loss, especially from West Antarctica and the northeast quadrant of Greenland. Steve of Michigan called in to correct their *gross* misunderstanding: the scientists had failed to read NASA's news that the sea ice around Antarctica had reached a record maximum area. The two scientists, he explained, are "fear mongering climate change nuts."

Reality, in whatever form, can make a difference, even if it's only a few days on a cruise ship. The 36,702 tourists who visited the Antarctic last season will pass it on, each in her or his own way. Maybe one will tell Steve.

Guy Guthridge

Where we stand on ice sheets

by Eric Rignot

At the American Geophysical Union Fall Meeting in December Eric Rignot, NASA Jet Propulsion Laboratory and University of California Irvine, gave the broad view of where science stands in understanding ice sheet dynamics and sea level change. Here's an excerpt.

Modern views of ice sheets provided by satellites, airborne surveys, in situ data, and paleoclimate records, while transformative of glaciology, have not fundamentally changed concerns about ice sheet stability and collapse that emerged in the 1970s.

Motivated by the desire to learn more about ice sheets using new technologies, we stumbled on an unexplored field of science and witnessed surprising changes before realizing that most were coming too fast, soon, and large.

Ice sheets are part of the Earth system; they interact vigorously with the atmosphere and the oceans, yet most of this interaction is not part of current global climate models. Since we have never witnessed the collapse of a marine ice sheet, observations and exploration remain critical sentinels. At present, these observations suggest that Antarctica and Greenland have been launched into a path of multi-meter sea level rise caused by rapid climate warming.

While the current loss of ice sheet mass to the ocean remains a trickle, every millimeter of sea level change will take centuries of climate reversal to get back. Several major marine-terminating sectors have been pushed out of equilibrium, and ice shelves are irremediably being lost. As glaciers retreat from their salty, warm, oceanic margins, they will melt away and retreat slower, but concerns remain about sea level change from vastly marine-based sectors: 2-m sea level equivalent in Greenland and 23-m in Antarctica.

Significant changes affect marine-based sectors in Greenland – Jakobshavn Isbrae and the Northeast Greenland Ice Stream – with Petermann Glacier not far behind. Major changes have affected the Amundsen Sea sector of West Antarctica since the 1980s. Smaller yet significant changes affect the marine-based Wilkes Land sector of East Antarctica, a reminder that not all marine-based ice is in West Antarctica.

Major advances in reducing uncertainties in sea level projections will require massive, interdisciplinary efforts that are not currently in place but are getting there. Projection scenarios are overwhelmingly conservative, pushed up by observations, awaiting more detailed knowledge of ocean circulation, winds, ice-ocean interaction, and mechanics of rapid ice fracture, not to mention the mere definition of static boundaries (ice thickness and sea floor bathymetry).

Here are a few recent findings that likely helped shape the above statement.

- "Today we present observational evidence that a large section of the West Antarctic Ice Sheet has gone into irreversible retreat," said Eric Rignot, lead author of a 27 May 2014 paper in *Geophysical Research Letters*. "It has passed the point of no return." Four feet of ocean rise will be the likely outcome over the next couple of centuries from the six outlet glaciers Rignot and his team examined directly. The disappearance of those six will destabilize other sectors, and "the ultimate rise could be triple that."
- Ian Joughin came to comparable conclusions in "Marine ice sheet collapse potentially under way for the Thwaites Glacier Basin, West Antarctica," *Science*, 16 May 2014.
- A shift of winds to the south has nudged warmer ocean currents closer to ice

shelves, particularly in West Antarctica, and now is responsible for more than half the total melting of some ice shelves, according to another paper by Rignot and others, this one in the 19 July 2013 *Science*.

- Fernando Paolo and others state in a 26 March 2015 *Science* paper, "Volume loss from Antarctic ice shelves is accelerating," that average ice-shelf volume change accelerated from negligible loss at 25 ± 64 km^3 per year for 1994-2003 to rapid loss of 310 ± 74 km^3 per year for 2003-2012. West Antarctic losses increased by 70% in the last decade, and earlier volume gain by East Antarctic ice shelves ceased. In the Amundsen and Bellingshausen regions, some ice shelves have lost up to 18% of their thickness in less than two decades.
- A warmer Antarctica means more snow. Jay Zwally and others (30 October 2015 *Journal of Glaciology*), using satellite data, found the Antarctic ice sheet gained 112 billion tons of ice a year from 1992 to 2001. The gain declined to 82 billion tons of ice per year between 2003 and 2008. "We're essentially in agreement with other studies that show an increase in ice discharge in the Antarctic Peninsula and the Thwaites and Pine Island region of West Antarctica," said Jay (of NASA Goddard). "Our main disagreement is for East Antarctica and the interior of West Antarctica – there, we see an ice gain that exceeds the losses in the other areas." But it might take only a few decades for Antarctica's growth to reverse. "If the losses of the Antarctic Peninsula and parts of West Antarctica continue to increase at the same rate they've been increasing for the last two decades, the losses will catch up with the long-term gain in East Antarctica in 20 or 30 years -- I don't think there will be enough snowfall increase to offset these losses."

In a 2 November 2015 review in the online *Science Magazine News*, Rignot say "the jury is still out" on various time scales currently proposed for West Antarctic collapse. The long-term evolution of an ice sheet "is a very complex modeling problem. Some of the variables controlling the models are not all that well known," including winds, ocean circulation, and how icebergs calve. "There is not a model out there that is getting it right, because they all have caveats. I think the discussion is ongoing, and it is only going to be more interesting with time."

Review: *It's a Dog's Life in Antarctica*

by Tom Henderson

Peter Otway's new memoir, *It's a Dog's Life in Antarctica*, is an excellent first-hand account of one of the last major dog sledge mapping expeditions in Antarctica. Structured around his detailed diaries over two seasons in the field and a winter-over between, this is a glimpse of classic sledging life in a forbidding and relatively unexplored continent through the eyes of a young, eager surveyor. His travails and triumphs as a member of the 1960-1962 New Zealand topographical and geological team surveying the treacherous terrain of the Transantarctic Mountains south of Ross Island make for fascinating reading.

The book is a portrait of close comrades, dedicated dogs, and the adventures they shared. It is richly illustrated with photographs, most of them in color. Peter wisely took a good camera on the expedition as evidenced by the numerous photos that he himself took. His images of the region around the Axel Heiberg Glacier and Mount Nansen are nothing less than spectacular.

The descriptions of the dogs are a highlight. Each had its own personality and temperament; "Brae, to put it mildly, is pugnacious and clueless ….. He is so

completely without fear or brain, when he gets a beating from one of us, he immediately blames the dog next to him at the time and flies at him. . . . Despite this, he can pull exceptionally well and often starts an excited yapping and straining ahead as though he sees a vision beckoning him on."

The ceaseless work and long hours of the summer sledging are contrasted by the more relaxed winter regime at Scott Base. Peter describes the activities of the small wintering party that passed the time and focused minds during the endless winter night. One of these activities was photographing the aurora, stars, and twilight, the most brilliant of which appear in this segment of the book.

Another highlight is the account of his team's descent of the Axel Heiberg Glacier during the 1961-1962 summer, the first since Amundsen accomplished the feat 50 years earlier during his expedition to the South Pole. His descriptions of the treacherous ice falls and huge crevasses leave the reader envying the sheer adventure of it.

This book is a fine read which both experienced Antarctic veterans and those with an armchair fascination with The Ice will enjoy. It is a record of the end of an era.

The book currently is available only in New Zealand. Peter will gladly take orders from non-Kiwis. Contact him at otway1@xtra.co.nz. The cost is $45 (NZ) plus $37 (NZ) mailing (a total of $54 US at current exchange rates). An easy way to handle the currency exchange is to pay through PayPal.

Penguins in the zoo: reducing mortality from 50% to 1%

by Scott Dreischman

In the wild, penguin mortality can be high. An ornithologist at Hallett Station, Antarctica, in the 1960s observed that in one season 39 percent of eggs and chicks died. Storms, predators, and other factors such as sea ice extent make growing up a tough proposition.

In the early 1970s Sea World accepted the transfer of a number of Adélie penguins from the National Science Foundation. Dr. Richard Penny had finished his grant work with the birds he had moved from the Antarctic to the zoo.

At Sea World they were kept in a refrigerated facility with clean filtered water. They prospered and bred readily. At the same time Frank Todd arrived as the new curator of birds. Frank was enamored with the penguins and was encouraged by their breeding activity. Shortly after his arrival, NSF asked if Sea World would be interested in establishing a large, long-term penguin breeding program for Adélie and emperor penguin. How could Frank resist?

A cooperative agreement was formed. Sea World would build and maintain the facility and the birds, and it would allow NSF grantees to perform noninvasive research on the penguins. NSF would provide logistics, both on the Ice and transport to California.

In 1972 Frank flew to McMurdo. His goal was firsthand experience of how the birds conducted their lives during the breeding season. He immediately saw snow, ice, and cold. It was not a stretch to say that, in captivity, the birds would need these conditions if they were to survive. Frank quickly envisioned how we needed to build and exhibit.

Throughout the 1970s Frank, I, and others made several more trips to the Ice to gather more knowledge about the birds, conduct baseline research, sample blood for viruses, and record other aspects of penguin life. Breeding pairs of birds were brought to Sea World to test nest site or mate fidelity.

The staff at Sea World faced a monumental challenge. Up to that point, penguins that were collected from the wild had less than a 50% chance of survival in

the first year. Most were dying of a fungus they had no resistance to. The birds of which we aware at other facilities were a different species than we were working with, but we knew we had the same issue. The solution was obvious: remove the fungus from the air before it got to the birds. Through extensive air filtration – originally 5-gallon pails filled with an antifungal dripping onto towels at the point makeup air came into the facility, and later HEPA (High Efficiency Particle Arrestance) filters – we reduced mortality from 50% to less than 1%.

Both Adélie and emperor penguins were brought from McMurdo Station to Sea World on a C-141 aircraft. NSF working with the Air Force did a remarkable job of assuring the birds were safely delivered to San Diego. Many hilarious stories are associated with those sometimes perilous airlifts.

The penguins were flown all the way from McMurdo via New Zealand and Hawaii with a "cold deck" – an airplane interior at subfreezing temeratures. Society member David Bresnahan, then an NSF Antarctic operations manager, was on all those flights. It is unknown if David was so dedicated to his job he was making sure it went well, or he just wanted to get back home to his wife! Either way, his oversight was critical to the success of the transport.

In following years, eggs instead of live penguins were collected in Antarctica, which made the moves more efficient. The eggs were successfully incubated and the young raised at Sea World.

Once at Sea World the birds settled in nicely and were breeding like flies. The year 1982 brought a special event. The emperors had laid eggs, and in September the first ever emperor chick in a controlled environment hatched. It was the first time anyone had seen an emperor penguin less than six weeks of age. For all of us working there, it was the sign that we could successfully keep these highly specialized birds. In 1983 the Penguin Encounter of Sea World, San Diego, opened after a 2-year construction. The rest is history.

At least three PhDs have been completed at the Penguin Encounter. Numerous field research methodology strategies have been solved. Bioenergetics studies, bioacoustics, and breeding behavior work have added to our knowledge of these fascinating birds. Breeding is continuing after more than 50 years.

Offspring of the original wild penguin group are adding to captive breeding colonies across the globe. Every person involved with this endeavor was part of a remarkable legacy in zoological history.

Scott Drieschman was Curator of Birds at Sea World for 16 years. He has lectured extensively and published numerous research papers and articles. He travels the world consulting with zoos and aquariums providing advice for the well being of birds and other animals. Drieschman received the Antarctica Service Medal in the early 1970s for his time in Antarctica working with penguins.

Review: *Reclaiming S. Georgia*

by Stephen Dibbern

South Georgia is a breathtakingly beautiful sub-Antarctic island with an extraordinary population of wildlife: fur seals, elephant seals, penguins, and other ground-nesting birds. Introduced populations of rats and mice devastated the bird colonies. The rats came with the discovery and exploitation of South Georgia, first by Yankee and British sealers and later by the whaling industry, which populated the island from the turn of the 20th Century until the 1960s.

New Zealand had pioneered "de-ratting" sub-Antarctic islands, but its projects were small compared to South Georgia. This book is the story of the

attempt by a small Scottish environmental group, the South Georgia Heritage Trust (and its U.S. branch, the Friends of South Georgia Island) to eradicate the scourge of rats and mice from the island.

The project began in 2007 and took four operating seasons. The authors of the book *Reclaiming South Georgia – The defeat of furry invaders on a sub-Antarctic island* are Tony Martin and Team Rat (South Georgia Heritage Trust, 2015). Tony Martin directed operations all four seasons. They referred to themselves as "Team Rat," thus the colorful authorship. Eradication took place using helicopters to bait areas of the island divided by glaciers that isolated discrete rat environments. The large island thus was baited without rats repopulating treated areas.

Those who have visited South Georgia (as I have) will understand what the flying must be like in a place where the weather is violent and changeable. The text describes the operation in readable detail without burying the reader in jargon. It is an exciting read; the location and weather provided tension and anticipation.

In some ways the best of the book is its lavish photography, much of it from the air. Because South Georgia has no airport, aerial photography of the island is rare. (A British military friend was sent to the island after the Falklands War to find a runway site. The one candidate was deemed so huge an ecological disaster that the military did not even consider the idea!) This smallish coffee table book is of the very finest order. It seems sized to fit a tourist's luggage after a trip to the island.

Spoiler alert: The eradication effort appears to have been successful. Proof of success lies in an otherwise unremarkable little bird, the South Georgia pipit, the island's only song bird. It is breeding now on parts of the island where rats and mice had decimated the population. Slower breeding larger sea birds such as the albatross will take longer to reestablish, but now they have a chance.

I highly recommend this remarkable book. South Georgia is an enchanting place, and Team Rat has given its wildlife a new beginning. The $40 U.S. plus shipping price helps fund a follow-up visit to check on the completion of the eradication. I will close with an anecdote from the book: a well-known ornithologist said, "if he had one week to live, he would spend four days on South Georgia and the other three days getting there!"

Reclaiming South Georgia is available from the South Georgia Heritage Trust, www.sght.org

Christopher Wilson, 1946-2015

Christopher Wilson with Storm Petrel

Killer whales ganging up on and eating a juvenile humpback is an apparently undocumented event (other than observation of stomach content after the fact). Passengers last season aboard *Zaandam* saw such a spectacle right alongside the Antarctic cruise ship, but only because onboard naturalist Christopher J. Wilson with his signature Svarowski binoculars spied unusual activity on the surface, raced to the bridge, and convinced the captain of the 785-foot ship to turn around.

Chris's description of the incident is in the April 2015 issue of this newsletter. It is his first, and last, contribution to the Antarctican Society. Debarking *Zaandam* near the end of the 2014-2015 austral summer after a 2-month tour aboard as naturalist and lecturer, he said, "I'll be back next season, health permitting."

Health did not permit. Diagnosed in July as having pancreatic cancer, he died in August, age 69. His wife Annie told your editor that fears and tears dominated first knowledge of his fate, but "He was laughing at the end."

Author and broadcaster as well as naturalist, Chris was a great nephew of Edward A. Wilson, the naturalist and artist with Robert F. Scott's second British Antarctic Expedition, 1910-1913.

Chris was born in July 1946 at Sevenoaks in Kent and brought up there and in Ghana, where his father and mother were medical pioneers. He was a London policeman for 16 years, married Ann O'Brien of Tipperary in 1968, and moved to Ireland in 1981. There, he recorded local fauna and flora and became, through radio and other media, a widely known naturalist.

In 1991 he became warden of the Wexford Slobs Wildfowl Reserve, looking after much of the world population of Greenland white-fronted geese each winter. Chris's work on the breeding biology of the tree sparrow saw him elected as a Scientific Fellow of the Zoological Society of London. He also worked on conserving the orange-bellied parrot in South Australia and looked after the breeding colony of roseate terns in Wexford, Ireland, where he lived.

Chris was the author of several books, particularly on wildlife of Ireland, and he co-authored two volumes of his great uncle's wildlife notebooks with his brother, David. He campaigned tirelessly, without success, to persuade the Irish Government to sign the Antarctic Treaty.

Chris Wilson's enthusiastic lectures aboard *Zaandam* about Antarctic and Southern Ocean wildlife enriched birders and neophytes alike with his accurate and intimate explanations. His sometimes day-long commentaries, made severally over loudspeaker from the bridge of the ship, were as exuberant at the end of the day as they were at the beginning of it. "Oh, ladies and gentlemen," he said during a particularly memorable passage through LeMaire Channel in February 2015, "what a day this is! Thank you. Chris Wilson here."

Arthur E. Jorgensen, 1933-2015

Arthur "Art" Jorgensen, nicknamed Red Jacket, died at 82 on 30 October 2015 at his home in Hilton Head, South Carolina.

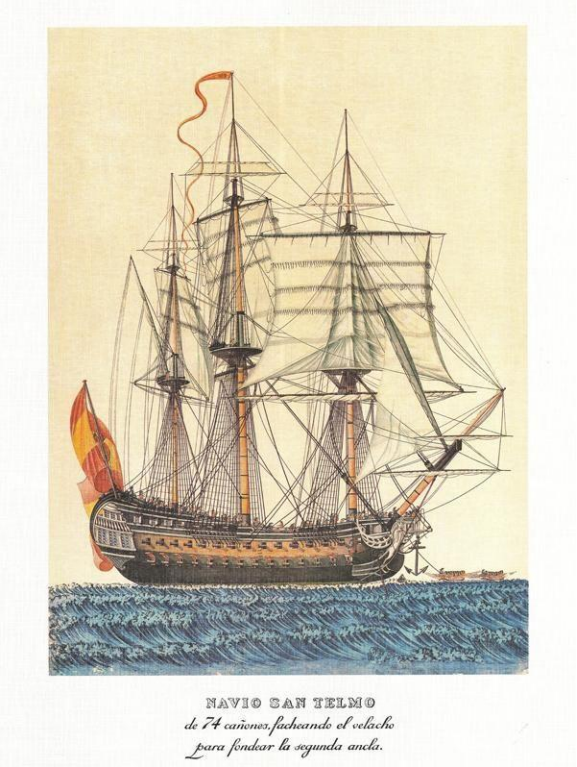
He wintered at Amundsen-Scott South Pole Station during its first (1958) winter as meteorological aide, using skills learned in the Navy and during his studies of meteorology and climatology at Rutgers University. Art raised the second Norwegian flag to fly at the South Pole, the first having been by Roald Amundsen in 1911.

He was a member of The Antarctican Society, and in lieu of flowers the family suggested donations to the Society. Art is survived by his wife Joan Jorgensen of Hilton Head and a large family.

Did you know?

In 1819 the 74-gun *San Telmo*, flagship of four Spanish navy men-of-war sailing from Spain to Peru, sank in Antarctic waters. All 644 officers, seamen, and soldiers on board died, by far the largest documented loss of life in the Antarctic. A storm in Drake Passage south of Cape Horn had destroyed rudder and topmasts, and the ship had made for the south seeking better weather. *Primerosa Mariana*, one of the other ships, tried to tow *San Telmo*, but

hawser after hawser parted, and *San Telmo* was lost on 2 September in about 62°S 70°W, a position 70 nautical miles or so west of the South Shetland Islands group. Built in 1788, *San Telmo* measured 53 by14.5 meters (174 by 48 feet). It was one of the best ships of the Spanish Armada in the late 18th century.



Woodblock Print of *San Telmo*

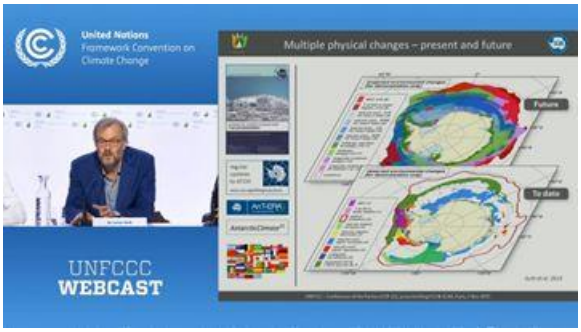
William Smith in the brig *Williams*, who discovered the South Shetland Islands and put a crew ashore on King George Island on 15 October 1819, just weeks after *San Telmo* was lost, is said to have found an anchor stock and perhaps spars presumed to be wreckage from the warship. In 1820 James Weddell, on a sealing voyage prior to his famous voyage far into the Weddell Sea, found evidence that survivors of a shipwreck had lived for a period on what he called "the principal in the group" of South Shetlands. A cairn, Antarctic Treaty Historic Monument 59, on Livingston's Half Moon Beach, commemorates those lost.

King Ferdinando VII had sent the ships to Peru to try to counter the independence of Spanish territories in South America. The leaders of Chile (Bernardo O'Higgins) and Argentina (Jose de San Martin) – now heroes of the two countries – had routed the Spanish military at Chacabuco, Chile, on 12 February 1817, and they continued to harass Spanish shipping.

Today, San Telmo Island (by Livingston Island), the historic monument at Half Moon Beach, and the year-round Antarctic stations O'Higgins (Chile) and San Martin (Argentina) commemorate a dramatic part of South American history and the largest loss of human life in the Antarctic.

[Sources: Lonely Planet, *Antarctica*, 5th edition; www.wrecksites.eu, Wikipedia, www.worldofwarships.eu, *Geographic Names of the Antarctic* (USBGN, 1995), Joan N. Boothe, author, *The Storied Ice*.]

Antarctica at Paris climate talks



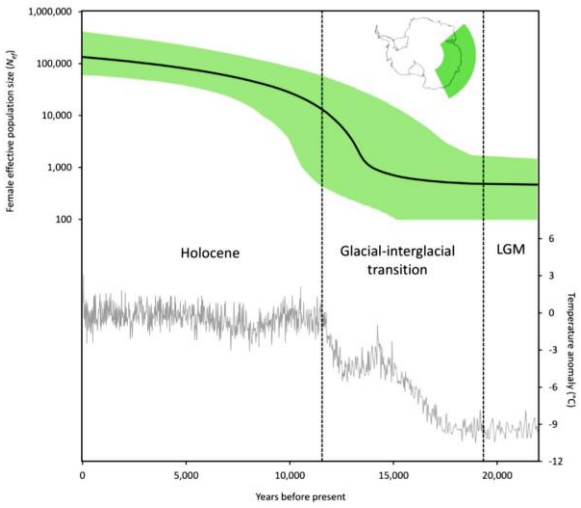
An Antarctica Day at the Paris COP-21 climate conference in December 2015 (www.cop21.gouv.fr/en/) presented the theme, "View from Two Poles: Climate Lessons from the Arctic and the Antarctic." Four talks by Ricarda Winkelmann, Jonathan Bamber, Jeremy Wilkinson and Frank Pattyn centered on Arctic sea-ice changes and on the instability of the Antarctic and Greenland ice sheets and resulting sea-level rise.

Julian Gutt in a fifth talk focused on responses of benthic and pelagic systems, including top predators, to environmental change. A press conference provided for interviews on climate change in the Southern Ocean and Antarctica. Julian Gutt, at an additional event organized by the International Union for Conservation of Nature, talked about life in the Southern Ocean and how to get results from climate impact projections into conservation strategies.

The presentations are part of the most recent update of the SCAR *Antarctic Climate Change and the Environment* (ACCE) report to the Antarctic Treaty consultative meetings. For more see scar.org.

More Adélies since Ice Age

An article in the October 2015 newsletter reports that the global breeding population of Adélie penguins today is 53-percent larger (3.79-million breeding pairs in 251 breeding populations) than when the last estimate was made in 1993. The information is from a 2014 paper in *The Auk*, 131(4): 457-466, online without restriction.



A more recent paper, in *BMC Evolutionary Biology* (2015) 15:236 (also open access, published online 18 November 2015), finds that if you look back 14,000 years instead of just 22 years, the Adélie penguin population has expanded 135-fold. The population growth was coincident with deglaciation in East Antarctica and, therefore, an increase in ice-free ground suitable for Adélie penguin nesting.

Analysis indicates that East Antarctic Adélie penguins share a common ancestor with Adélie penguins from the Antarctic Peninsula and the Scotia Arc, with an estimated age of 29,000 years ago, in the midst of the last glacial period. This finding suggests that colonies today in East Antarctica, the Scotia Arc, and the Antarctic Peninsula were founded from a single glacial refuge.

While deglaciation appears to have been the key driver of population change over millennia, sea ice changes are a critical driver of Adélie penguin population success over decadal and yearly timescales, This distinction highlights the need to consider millennial-scale trends alongside contemporary data when forecasting species' abundance and distribution changes under future climate change scenarios.

The study focuses on East Antarctica, home to 30% of the global population of Adélie penguins. The scientists used mitochondrial DNA from extant colonies to reconstruct the population trend over the last 22,000 years. To determine the relationship of East Antarctic Adélies with populations elsewhere in Antarctica, they constructed a phylogeny using mitochondrial DNA sequences.

The authors, Jane Younger and four others, are from the Institute for Marine and Antarctic Studies, University of Tasmania, and other Australian research institutions.

Antarctic Gathering at Port Clyde, Maine, 15-17 July 2016!

Thirty-five Society members have written Paul Dalrymple or your editor expressing interest in participating in an encore Antarctic Gathering in Port Clyde, Maine, this summer. Dates are Friday 15 July through Sunday 17 July 2016 if we do this. We appreciate that others have expressed a preference for a date in 2017, but time has a way of marching on, and we decided to *carpe diem*.

That's enough interest to lead us to the decision to hold the next Gathering this year. If you are planning to attend, help us get ready by writing your editor or Paul at the emails shown on the front page of the newsletter. This spring we will email you with a specific schedule for the three days.

Paul's house and lawn on Marshall Point just outside the village of Port Clyde will be the locus of festivities. Welcoming refreshments will await starting noon Friday.

Saturday will center on Antarctic presentations in the celebrated Garage Theater. We are still in the welcoming stage for suggestions about speakers and topics. Saturday evening will be dinner on your own at one of the area's restaurants.

Midday Sunday will be a lobster feast in Paul's yard.

How to pay for all this is as unique as is the Antarctican Society itself. A bucket or two will be placed around Paul's yard, and you toss in cash or check in the amount you think is right. This amazing accounting system has resulted in pretty much breaking even at past gatherings.

Hotels, b&bs, and rental cottages abound (see p.10), but summer demand can make an early reservation prudent. Find out an establishment's cancellation policy when you reserve so that you can back out if not enough people express interest in coming. Paul welcomes tent campers to pitch tents in his yard. Because of extremely limited parking, however, wheeled campers won't be admitted on Paul's lawn or driveway. The entire Marshall Point area is just as limited for parking even a little car.

Old Antarctic hands and new. Terrific food. Coastal Maine in summer. That's a recipe for three great days!

More details will follow in the next newsletter.

Antarctica 2016 calendars!

Email Treasurer Paul Dalrymple (see masthead, p. 1) for one of these great Colin Monteath (N.Z.) calendars. $22.50 each while they last. Paul has only a dozen or so left.

Lodging in and near Port Clyde, Maine (see also www.visitmaine.com)

East Wind Inn
21 Mechanic St
Tenants Harbor, Maine 04850
207 372 6366 800 241 8439
e-Mail: infor@eastwindinn.com
Web Site: www.eastwindinn.com
Distance to Meeting: 5.5 Miles

Mill Pond House B & B
Leslie Korpinen, proprietor
453 Port Clyde Rd,
Tenants Harbor, ME 04860
(207) 372-6209
e-Mail: mlpndhse@midcoast.com
Web Site: www.millpondhouse.com
Distance to Meeting: 3miles

Ocean House Hotel
870 Port Clyde Road
PO Box 66
Port Clyde, Maine 04855
207 372 6691
Propriator: Patsy Merdock
e-Mail: info@oeanhousehotel.com

Web Site: www.oceanhousehotel.com
Distance to Meeting: .5 mile

Seaside Inn B&B
8 Cold Storage Rd
PO Box 215
Port Clyde, MaE 04855
800-710-2817
207-372-0700
e-Mail: innkeeper@seasideportclyde.com
Web Site: www.seasideportclyde.com
Distance to Meeting: .5 miles

Craignair Inn
Innkeepers, Michael and Joanne O'Shea
5 Third Street
Spruce Head, ME 04859
1.800.320.9997
Web Site: www.craignier.com
Distance to Meeting: 12 Miles

Gilchrest House
P.O. Box 497
Tenants Harbor, ME_04860
Tel: 207.372.6735
e-Mail: info@gilchresthouse.com
Web Site: http://www.gilchresthouse.com
Distance to Meeting:

Long Cove Cottages
174 River Rd.
Tenants Harbor, ME_04860
Tel: 207.372.8994
Web Site:
e-Mail: lccrhm@aol.com
Distance to Meeting: 6.3 Miles

Pointed Fir Cottage
401 Port Clyde Rd.
Tenants Harbor, ME_04860
Tel: 207.372.6213
Web Site:
e-Mail: pntdfir@aol.com
Distance to Meeting: 2.9

Book as soon as you can. The closest and smallest is The Ocean House in Port Clyde, less than a mile from Paul's house, as is Seaside Inn. Five miles away in Tenants Harbor is the East Wind. Both offer attendees a discount (ask for it). Eight miles from Port Clyde is the Craignair Inn. No real bargains in Maine in the summer, but on the other hand it is never hot. Remember: parking at Paul's house is very limited. Carpool to Paul's house each day with other attendees who are staying where you are lodging.