

# The Antarctic Site Inventory



2010 Annual  
Report from  
Oceanites, Inc.

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Above photo: Gentoo penguin

**To all Oceanites supporters and friends —**

Happily, I can report that the 17th field season of the Antarctic Site Inventory is underway and that we’re expanding our effort to understand the changing population dynamics of Antarctic Peninsula penguins. We continue setting the pace within the Antarctic Treaty system, providing everyone — from diplomats and environmentalists to tourism operators and concerned citizens — with the latest penguin population data and analyses from the location where it’s warming faster, or as fast as, anywhere else on our planet.

Our study penguins, of course, are “sentinel species” that can show us the impact of climate change on a living system and, for sure, the changes they’re experiencing suggest what might be happening at some point in our own backyards.

In 2011, we will be publishing the 3rd edition of our acclaimed Antarctic Peninsula Compendium, which has been a respected building block for Antarctic conservation since 1997. I’d also like to call your attention to exciting new science and education initiatives — censuses of chinstrap penguins in the far-flung South Sandwich Islands, a nationwide PBS broadcast of the “Counting Penguins” movie about the Inventory, virtual classrooms, and the Oceanites iPhone App.

Once again, I’m immensely grateful to all of you who support our efforts in these difficult economic times. As you know, we’re the only nongovernmental, publicly supported organization doing scientific research in Antarctica. Though our budget is tight, we continue to produce cutting-edge, cost-efficient work that advances the cause of Antarctic conservation for future generations.

In a nutshell: The science and education continues. We’re looking forward to more successes — and thrilled you’re with us. As always, keep dreaming penguins!

With all best wishes,

Ron Naveen  
President, Oceanites, Inc.  
November 25, 2010

**Antarctic Site Inventory Update —  
Cementing our scientific role in Antarctica**

At the 2010 Antarctic Treaty Consultative Meeting in Punta del Este, Uruguay, the U.S. submitted two Information Papers regarding the Antarctic Site Inventory. The first was an annual summary of Inventory results; the second, our analysis of ship traffic in the Antarctic Peninsula, examining where tourism activities are concentrated.

Over 16 seasons from November 1994 through February 2010, the Inventory now has made 1,035 site visits and collected data at 128 Antarctic Peninsula locations. Last season, we accomplished 81 visits to 40 locations.

Critically, the Inventory will be in position to answer specific questions regarding the likely drivers of population changes and to forecast Peninsula-wide changes in the relative balance among the Peninsula's penguin species, which represent an important link in conserving Antarctica for future generations. We have become the Treaty nations' "Go To" resource for understanding changes occurring in the vastly warming, Antarctic Peninsula environment.

To give you a front-row seat view of what is happening, the Inventory continues to document rapid change in the relative populations of gentoo, chinstrap, and Adélie penguins in the western Antarctic Peninsula.



An adornment of Adélie penguins.

The Inventory remains a key player at the Antarctic Treaty table, monitoring the changing Peninsula environment so that Treaty nations can think about the Antarctic Peninsula ecosystem as a whole and make informed policy decisions.

Our colleague, Dr. Heather Lynch, from The Fagan Lab at the University of Maryland, spearheads the Inventory's effort to analyze how the vastly warming Antarctic Peninsula region is changing.

Gentoo penguin populations are increasing rapidly and expanding their range southward, while the other two species are declining significantly. Our analyses will be the first-ever explanation of precisely how the warming Peninsula effects these changes — e.g. whether or not the changes we've detected are or may be related to food (krill and fish distribution and abundance), disease, oceanography, other changes in the physical environment, or a synergy of these factors.

We're also very pleased to announce a significant upgrade to our analytical efforts for the 2010-11 season.

We have developed a new association with the Antarctic Geospatial Information Center (AGIC) at the University Of Minnesota. Through this new relationship, Oceanites and the Inventory will obtain high-resolution, geo-referenced, satellite photography of all of our key study sites, thus enabling significantly upgraded penguin population censuses and estimates, everywhere the Inventory works.

**The 2010-11 Field Season —  
New scientific opportunities in our 17th year**

The Inventory's 17th field season began in November 2010 onboard the Lindblad Expeditions vessel *National Geographic Explorer*. In addition, Inventory researchers will be working one departure on *The World* and participating in a 3-week cruise on the U.S. National Science Foundation vessel, *Lawrence M. Gould*. The latter is expected to visit a variety of locations in the South Shetland Islands that have not been censused recently by the Inventory.

During January 2011, Oceanites will participate in a unique yacht survey of the South Sandwich Islands, at the far end of the Scotia Arc, east of the Antarctic

The roster of Antarctic Site Inventory researchers for the new season includes: Heather Lynch, William Fagan, Thomas Mueller, Steven Forrest, Melissa Rider, Rosemary Dagit, Iris Saxer, Michael Polito, Rebecka Brasso, Paula Casanovas, Elise Larsen, and Richard White.

**Digital Oceanites**

To ensure that Oceanites stays front and center with the full variety of our constituents, we work hard to ensure that the Oceanites Website — [www.oceanites.org](http://www.oceanites.org) — continues to flourish, as well as the Oceanites Blog site — <http://oceanitesfeed.wordpress.com/> — that tracks the latest news regarding penguins, our Antarctic Site Inventory project, and global warming.

We've also developed a new Oceanites iPhone App — available for free in Apple's iTunes Store, which delivers up-to-date news about Oceanites, the Inventory, and climate change. Go to:

<http://itunes.apple.com/us/app/oceanites/id351845012?mt=8>



A fizzle of soon-to-fledge gentoo penguins.

Peninsula. This will provide the Inventory a unique look at a location that hasn't been surveyed since 1997. The South Sandwich Islands represent a bastion of breeding chinstrap penguins, perhaps as many as 30 percent of the world's breeding population. The 1997 survey suggested a breeding population of 1.5 million pairs, which, itself, was a considerable decline from an estimated breeding population of 5 million pairs in 1966.

Given more recently detected chinstrap penguin declines in the Peninsula, this new effort will assess whether this population has stabilized, or declined further. The South Sandwich Island yacht expedition is a rare opportunity to find out how many chinstraps remain in this rarely visited island chain, and our new census data will undoubtedly help revise the global population estimates for chinstraps.

**Virtual Classrooms bring  
Antarctica into physical classrooms**

Oceanites has recently inaugurated a series of Virtual Classroom sessions. These 30-minute sessions provide a useful interchange between teachers, students, and working scientists — and, hopefully, will expand in number and continue in future years. Our goal is to plant seeds for an entirely new cohort of young scientists. If you're a parent or a teacher, please contact Ron Naveen to make arrangements.

**"Counting Penguins" on PBS and in France**

*Counting Penguins*, the documentary film about Oceanites and the Inventory, produced by the Lindblad Expeditions Video Unit, debuted on the National Geographic Explorer during the 2009-10 season, and plans

are underway for a nationwide, PBS broadcast of the film in 2011. The film recounts the work of the Antarctic Site Inventory at Petermann Island from 2003-08, how Inventory researchers tally penguin nest and chick counts, and what the data portend regarding changing population numbers of Adélie and gentoo penguins.

The film also will be shown in Rouen, France, in March 2011 as part of a new exhibition about Charcot's 2nd French Antarctic Expedition (1909-1910) and the exploits of Charcot's lead biologist, Louis Gain.

### **Oceanites' ANTARCTIC PENINSULA COMPENDIUM — The new and improved 3rd edition**

We couldn't have done it without funding from the U.S. Environmental Protection Agency and the U.K. Foreign And Commonwealth Office, Polar Regions Section, and the Government of the British Antarctic Territory. With their help, Oceanites is pleased to announce the production of a 3rd edition of its *Antarctic Peninsula Compendium* (formerly titled, the Compendium of Antarctic Peninsula Visitor Sites).

The new name — *Antarctic Peninsula Compendium* — reflects Oceanites' increasingly comprehensive examination of the Antarctic Peninsula, now proceeding in collaboration and coordination with The Fagan Lab at the University of Maryland.

The *Compendium* serves as the building block for the series of site-specific visitation guidelines that have been adopted by the Antarctic Treaty countries. All Treaty-adopted guidelines are included in this new edition.

Just as important, the *Compendium* has become the unofficial "Bible" for those concerned with potential environmental changes in the Antarctic Peninsula. Since its 1st edition in 1997, the *Compendium* provides ship officers and expedition staff in the Antarctic tourism industry a handy and readily available reference to the plethora of potential visitor sites in this region.

The new revision will be available both in hard copy and digital formats, and covers all 128 sites visited and censused by the Antarctic Site Inventory in 16 field seasons, from November 1994 through February 2010. This, alone, is an increase in coverage of 46 new locations from the previous edition. Subarea maps, orientation maps, and site-specific species presence/absence information also have been updated. As well, 19 additional sites are described, from which Oceanites and the Inventory are compiling and analyzing penguin population data.

This 3rd edition will be field-tested during the 2010-11 season, and we will make it publicly available in advance of the 34th Antarctic Treaty Consultative meeting, which begins in Buenos Aires, Argentina, on June 20, 2011.

We are gratified and delighted that the work of the Antarctic Site Inventory, as reflected in the *Compendium*, has so greatly assisted the Antarctic Treaty system and the many who visit the glorious Seventh Continent. From the outset, the goal of Oceanites and the Inventory has been to compile a database that advances the implementation of the 1991 Protocol on Environmental Protection to the Antarctic Treaty, which, among other things, requires *a priori* environmental impact assessments for all human activities.

Those of us who have worked on and for the Inventory are enormously proud of our effort to characterize these sites in a meaningful manner, and to identify and analyze the changes that may be occurring.

From counting penguins with our handheld "clickers" to publishing new and forward-looking scientific papers, indeed . . . we are thrilled to be ambassadors for Antarctica and its penguins, the Antarctic Treaty's "eyes and ears", and the "Go To" environmental monitoring project within the Treaty system.

### **Oceanites Brochures**

We've developed a new Oceanites brochure to share with all of you who would like to involve friends, neighbors, and local conservation groups in "spreading the word" about penguins and Antarctic environmental changes. It features photographs of penguins and a brief description of our work and goals. For a supply, please contact Ron Naveen.

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