The 1991-1992 Antarctic shipboard tourism season has arrived, but with little joy on the part of the expedition operators who now face a double-whammy of economics and regulation. The recession and a slack U.S. economy are seriously crimping their recently flush business, and the Antarctic Treaty parties have begun considering tourism controls. There are more open berths than ever before and one company teeters on the verge of either sale or bankruptcy. Demand is flat and some expect this season to mark a wholesale shakeout among the Antarctic tour companies.

1991-92 also marks the operators' third season trying to keep their Antarctic trips "clean and green." Have they been responsible vendors in this regard? Will the sluggish economy expose their ecotourism efforts as mere public relations, window-dressing, or greenwashing?

Less Than A Super Bowl-Full of Visitors
Almost three decades have passed since Lars-Eric Lindblad first took expedition passengers to Antarctica and, now, the expedition component of the tour industry seems well ensconced. And at first glance 1991-92 looks like another banner season, with at least five operators and six ships plying Antarctic Peninsula waters. If all trips fill to capacity, another 5,000 people will be added...
to the roster of those who’ve made it to The Ice as tourists. By comparison, there were 2,000-3,000 annual tourists in the late 1980s. Underneath this facade, however, lies a season of discontent.

Antarctica is a prime travel venue that showcases a myriad of indelible memories — penguins, seals, seabirds, whales, and incredible scenery. But while The Ice has been an attractive focus for years, the reality is that, collectively, fewer tourists have visited Antarctica than were in the stands to see the last Super Bowl football game. Antarctica remains a very expensive trip, with minimum prices hovering at $4,000, not counting airfare. Antarctica is the last continent on most folks’ travel checklist: the shopping is non-existent, there is no permanent human population, and there is a dearth of bathing beaches and culture. But for the traveler tuned to her or his inner self, Antarctica offers a plethora of psychic rewards.

From much experience leading these shipboard expeditions, I’ve found that, on average, about 10-15% of the passengers are passionately interested in the wildlife and another 10-15% are similarly impassioned about the bar, food, and other amenities offered on board. The great mass of 70-80% in the middle seems genuinely curious about this special, captivating, uninhabited place at the “bottom of the world” and, with the right leadership, can be molded into committed Antarctic “Ambassadors.” The average age is in the low 60s, but this has dropped with the cheaper fares of recent seasons. The larger vessels now coming on line — with a capacity of 250 passengers or more — have much lower operating costs than the true expedition ships, which carry from 90 to 140 passengers. Certain types of tourists also have started flocking to Antarctica, particularly birdwatchers.

And in early 1991, during my annual, in- and post-season polling of passengers, I uncovered a new passion. One particular traveler had just returned from the large, 300-passenger Ocean Princess, which was operating for the first time in Antarctica. I wanted to know what he enjoyed most about his “trip of a lifetime,” expecting the usual answer of either penguins, seals, or scenery. To my utter shock, this gentleman raved about the ship’s gambling casino! I’m not sure that Antarctica is going to become the next Monte Carlo, but as the ships get larger and larger, I am concerned that the expedition spirit that first attracted me will start to wane considerably.

Zodiacs, Lectures, and Seaward Rock-n-Roll
These days, most of the trips are concentrated in the Antarctic Peninsula region south of Chile and Argentina. The trips begin and end with a two-days’ crossing of the Drake Passage and the Southern Ocean, which sandwiches five to seven days of cruising and landings in the Peninsula north of the Antarctic Circle. In previous seasons, there were one or two “circumnavigation” trips per season, from the South American side of the Antarctic to the New Zealand side, but costs and marketing factors have caused these to be abandoned. In 1990-91, in conjunction with the International Ornithological Congress in New Zealand, two expedition ships spent virtually the entire season Down Under. This season, though, all are back to regular haunts on the Peninsula.

Everything that you have heard about the wild waters of the Drake Passage is true. Only once in almost a decade of Antarctic traveling have I managed two straight, calm and clear days in the Drake. Serious, seaward rocking-and-rolling is to be expected, making the four days’ back-and-forth across the Drake the most unpleasant aspect of any shipboard Antarctic trip. When the ship starts doing 10-20’ rolls and plates start crashing in the dining hall, seasickness often makes an ugly appearance and it’s time to stay confined to quarters. On the upside, however, the seabird-watcher in me must add that these are also the best times for studying albatrosses — if you can find a steady place to anchor yourself on deck.

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Each trip is accompanied by a team of expert lecture staff and leaders who, presumably, have had some experience making these runs. Lectures are normally targeted on the sea-days between South America and the Peninsula. Once across the Drake, calm seas generally prevail and the discomfort of the open ocean is quickly forgotten. There may be periods of snow, and strong katabatic winds may whip-up the sea surface without warning, but the Peninsula offers a variety of landing options and many protected anchorages.

The five to seven days that constitute the “guts” of any trip are devoted to going ashore in rubber inflatables — zodias — for up-close-and-personal encounters with Antarctica’s wildlife and magnificent scenery, or for zodiac-touring near nest cliffs of shags or kelp gulls or to enjoy ice scenery in beautiful, glacier-cut bays. Weather permitting, passengers should expect two or three landings or zodiac tours per day. In addition to the scenery and wildlife, there may be visits to at least one of the many scientific research stations in the area, which offer a chance to meet the true “stars” of The Ice — the scientists attempting to uncover still unknown secrets of life on the planet.

There are orderly procedures for going ashore and an emphasis on safety. Early-on, there should be an abundance of lifeboat, zodiac, and life-jacket drills. But even the best of precautions can’t prevent accidents. Or deaths. As an expedition leader, I’ve had to deal with passengers’ broken limbs, one seriously ill individual who almost died from pericarditis, and one person who, ignoring staff precautions, slashed his feet on hot sand, while swimming in the volcanically heated waters at Deception Island. Over the years, there have been deaths from heart attacks and other diseases and, last season, an airplane carrying passengers for a late season Antarctic trip crashed en route to the ship, killing 19 people.

When all is said and done, though, this rather biased observer believes that the promise of Antarctic tourism is the very special way that it opens hearts and minds. Yes, the animals are incredible and the scenery practically indescribable. But it is Antarctica as metaphor that really counts. It is the only owned place on the planet and the only place where representatives of 75% of the world’s population work together harmoniously. Bringing back a horde of ambassadors preaching the gospel of a global community seems worth the difficulties.

**Codes and Ecotourist Values**

Having free-lanced for many seasons as an expedition leader and lecturer on a number of expedition ships, I feel a great measure of sadness that the industry seems to be hitting the economic skids. Moreover, I am greatly concerned that the industry’s recent progress toward “clean and green” operations will be lost to these unfortunate realities.

The earnest greening of the operators dates back to 1989. As readers of the *Newsletter* will recall (Issue 4, July-October 1989), it was in mid-1989 that I and other experienced Antarctic naturalists authored *The Antarctic Traveler’s Code* (see Sidebar for the English-, Spanish-, French-, and German-language versions), which is now distributed worldwide by Oceanites. At the October 1991 Antarctic Treaty meeting in Bonn, these versions of the Code were distributed to other countries by the U.S. delegation, as the Treaty parties began examining the issue of Antarctic tourism. While nominally directed at expedition passengers and operators, the *Code* covers all visitors to The Ice, including diplomats, scientists, and logistics personnel.

The *Code* was prompted by a serious concern that the companies weren’t paying enough attention to the growing clamor about their conduct. Articles in *TIME* and other international publications showed throngs of passengers surrounding penguins, obviously suggesting that the industry wasn’t well behaved. The worst criticism, however, stemmed from the tragic, January 1989 grounding and sinking of the Argentine ship *Bahía Paraiso* in Arthur Harbor, near the U.S. Palmer Research Station, in the Antarctic Peninsula. Though officially a supply ship for Argentine bases in the region, the ship also carried a horde of American tourists (see details in *The Antarctic Century Newsletter*, Issue 3, April 1989). The *Bahía* accident produced a lot of bad press for the operators, but the companies did little to stem the critical tide.

The *Code* attempted to spur the operators into believing they were the solution, not the problem itself. If they could do a little self-regulating, I believed that they’d find themselves generating a lot of good will. Unfortunately, in those days, a trip’s clean and green operations mostly depended on the sensitivity of the expedition-leader who happened to be in charge. In late-1989, subsequent to the release of the Oceanites *Code* and prior to the start of the 1989-90 season, a few of the operators devised their own tourist guidelines and began publicizing them in their advertising and to the press. Further, the operators and officials in the Polar Programs department of the U.S. National Science Foundation (NSF), who were nominally charged with their oversight, began increasing their coordination about the coming season’s logistics.

NSF’s interest in tourism also peaked, partly because the *Bahía* accident caused a number of environmental organizations to petition the agency and Congress for stricter tourism rules, and partly because so many tour ships were visiting the U.S. Palmer and McMurdo Research Stations. NSF had to take a closer look at limiting the number of visitors. It began annual meetings with the operators to divvy-up a specific number of annual station visits and, further, to request more information about sites visited and numbers of passengers actually visiting them.

But NSF resisted proposing its own tourist guidelines. Because of the international nature of Antarctica, which no one owns, and the Antarctic Treaty system, which guarantees free access to all, it would be difficult for any one country to act unilaterally. U.S. law might allow some regulation of U.S. passengers or of tour operators with U.S. offices, but would have no impact on foreign...
operators and their potential abuses. And while Antarctic tourism is predominantly American, there is a regular stream of Argentine and Chilean shipboard and airborne tourists to Antarctica, as well as one Canadian company (Adventure Network) that offers a series of land tours and climbing expeditions.

Entering the third season since the announcement of the Oceantites Code, the operators have made much progress to improve their operations. They have made a concerted effort to collect or compact all inorganic waste for proper disposal at home ports and have pushed hard for officers and crews to comply with the same guidelines that staff and passengers are following. NSF also deserves credit for providing much needed material to the operators, especially its "Bible" of regulations and maps that is now found on the bridge of each and every Antarctic tour vessel operated by companies with U.S. offices. Whereas the pre-1989 period saw many visits to Specially Protected Areas (SPAs) and Sites of Special Scientific Interest (SSSIs) that were totally off-limits, these meanderings have virtually ceased.

Still, each season, there are incidents of passengers getting too close to animals or trampling fragile mosses, and rumors about unauthorized entrances to the prohibited sites. But, with one exception, none appear to be widespread or repetitive abuses, either as to location or operator. The exception is the short and narrow beach facing the Polish Research Station, Arctowski, located in Admiralty Bay on King George Island. The beach ends at a Southern Elephant Seal wallow that abuts the Point Thomas SSSI, and expedition staffs need to do a much better job insuring that passengers don't leave the beach or go uphill, past the wallow and into the off-limits area.

More particular, recent criticism focuses on repetitive visits to certain visitor sites, and is clearly linked to the emergence of the larger vessels going south. Many question whether some of the sites can withstand more than 100 visitors per day. Even though the larger vessels may divide their passengers into units of approximately 100 per shore visit, a sustained interference for three to six consecutive hours of visits might be a detrimental overload.

In this respect, I am greatly concerned about landing sites that have little space for tourists to move about, and which contain resident wildlife that are very easily disturbed by tourists getting too close, too easily. Examples of these sites are: Port Lockroy on Weincke Island (Imperial Shags, Gentoo Penguins, Brown Skuas, Antarctic Terns); Hannah Point on Livingston Island (Kelp Gulls, Chinstrap Penguins, Kerguelen Fur Seals, Antarctic Terns, Imperial Shags); Waterboat Point near Paradise Bay, behind the abandoned Gonzalez Videla Station (Gentoo and Chinstrap Penguins); Danco and Cuverville Islands (Imperial Shags, Kelp Gulls, Brown Skuas, Antarctic Terns); Point Lookout, Elephant Island (Chinstrap Penguins, Macaroni Penguins, Kerguelen Fur Seals); and, depending on snow cover, Petermann Island (Adélie and Gentoo Penguins, Imperial Shags).

Aside from straightforward concerns about people-management, one aspect still missing is a scientific study of tourist/wildlife interactions in the Antarctic. But this is about to change. NSF has announced an intention to fund such a tourist-impact study and to have it fully underway by the 1992-93 season. Over time, it should provide a more scientific assessment of tourist/wildlife interactions at a number of locations and, perhaps, provide a basis for tourist regulations and controls. As we go to press, we have learned that the Scott Polar Research Institute also intends to initiate a similar study at Half Moon Island during the 1991-1992 tourist season.

In the interim, we're left with a conundrum. Yes, tours visit during the peak breeding season of many Antarctic animals. But assuming that passengers are kept at safe distances from the animals and properly supervised, tourists visits shouldn't be disruptive per se. Again, in most respects, it's a question of the animals' "personal space" and of proper supervision by qualified personnel.

Briefly looking at one relevant, but clearly non-Antarctic example, more than 50,000 people visit the Galapagos Islands annually, utilizing visitor trails that permit extremely close access to breeding animals — in some cases, much closer than suggested in the Code and the industry guidelines. As yet, however, none of the Galapagos trails have been closed because of visitor numbers or disruptions to the animals.

**Antarctic Treaty Politics**

In mid-1991, Antarctic tourism politics took a major turn as the Treaty parties signed a new Environmental Protocol (see News, in this issue). Although the accord doesn't address tourism specifically, it does update the rules on marine pollution, waste disposal, the protection of Antarctic flora and fauna, and institutes a new system of environmental impact statements for future human activities in Antarctica — all of which might allow recommendations about aspects of tourism. For example, "small boats" — zodiacs that take shipboard tourists ashore — are now defined clearly as a mechanism potentially causing harmful interference to birds and seals. Importantly, the protocol offers an interim solution to the most bitterly debated topic in Antarctic history: the future regulation of oil, gas, and minerals development (again, see News, in this issue). With this issue finally stilled, tourism is likely to become more of a "front-burner" issue.

With some relief, the operators learned that the official U.S. position at the October Treaty meeting in Bonn would focus on information-gathering, not on an immediate need for regulation. The U.S. position emphasized that, in order to properly assess the need for treaty-wide rules, the parties first should have better, collective knowledge about the tour operations of all nationals engaged in the business. In Bonn, French and Italian proposals to regulate tourism immediately were rejected, and the issue will be revisited in November 1992 at the next Treaty meeting. Nothing concrete is likely for another couple of years — at the earliest.
In anticipation of the pending limelight, the operators have formed their own lobbying group, the International Association of Antarctic Tour Operators (IAATO), to track U.S. and national politics on the tourism issue, to dispel misconceptions about their operations, and to more effectively lobby Congress, NSF, and the Antarctic Treaty system about their efforts.

But the stage is set. Clearly, the new protocol offers much ammunition for fashioning a treaty-wide system of tourism regulations, with enough on the table to suggest what new, international rules might entail: limits on the numbers of passengers or ships visiting any one site; a reevaluation of sites presently available to tourists; specific rules on distances to be kept from certain wildlife; perhaps a qualification system for expedition leaders; and maybe, an international system of independent observers.

On the U.S. side, implementation of the protocol might necessitate domestic operators’ filing a pre-season environmental evaluation summarizing their plans and intentions. Interestingly, the Greenpeace organization seems rather opposed to specific tourist regulations, seeing this as a matter of discrimination. In other words, since the Antarctic Treaty decrees free access to the continent for everyone, any codes of conduct should apply equally to all visitors, not just tourists. On the other hand, The Cousteau Society seems poised to push hard for tourist restraints.

**Lean Times, Clean Times?**

Economics are likely to have the most immediate effect on the companies’ cleanliness and greenness, as the recession and the slack U.S. economy make deep inroads into the expedition business. One of the most experienced Antarctic operators, a vessel carries twice as many passengers as other, experienced Antarctic expedition ships, it has a much lower operating cost per berth and, perhaps, a better chance of surviving bad financial times.

Even though the operators recently made great strides cleaning- and-greening their operations, my concern about people-management continues to fester. And it will magnify further when the 250-passenger Columbus Caravelle enters the Antarctic market this season. To date, the robust passenger load of the Ocean Princess made it the primary flashpoint for industry-wide criticism about too many people visiting too many sensitive sites without enough supervision. Now, it will have company. Will these newer, larger vessels devote more time to cruising Peninsula waters or to landing passengers for expedition stops? And without discounting the staffs of these newer operators, I see greater and greater numbers of staff personnel whose experience as naturalists or Antarctic expedition leaders seems less and less obvious. Antarctic waters and landing sites are getting very, very crowded — perhaps too crowded.

Newer operations like the Frontier Spirit (Salen Lindblad Cruising) and the Ocean Princess (Ocean Cruise Lines) don’t yet have the staff experience or the staff organization of the more experienced operators (Travel Dynamics, Society Expeditions). And, of course, the Columbus Caravelle is a totally blank slate. Last season, the operators voluntarily allowed a number of NSF-chosen observers on board. While the resulting observer reports were instructive, they did not have the stamp of independence and legality that attaches to observer reports in the eastern Pacific tuna fishery. And while NSF requires operators to file end-of-season reports on sites visited and numbers visiting, my view is that NSF must pay greater attention to what’s happening as the season progresses.

Because existing operators are similarly inclined, I also believe that their greenness hasn’t generated any noticeable, competitive advantage. In fact, with passengers flocking to the newer, larger vessels that offer cheaper fares, it might be said that experience and proven quality are rather irrelevant. The bottom line for many passengers remains the best fare possible, and for operators the *sine qua non* remains full ships and running profitably. The irony is that the larger ships don’t provide the same connections with the Antarctic environment, an intimacy that is the essence of expedition cruising. The large vessels aren’t likely to make as many landings as the small expedition ships, simply because it’s a major production to shuttle 250-300 passengers ashore. And they aren’t likely to visit the same places because, as mentioned, some sites are inappropriate for large numbers of tourists.

For one who has spent many years leading trips — birdwatching, whalewatching, and otherwise — it’s very strange to realize that your enterprise has become a buzzword — “ecotourism.” To me, the true measure of sensitive tourism has always depended on “yes” answers to these questions: Are we bringing back a committed group of “ambassadors” who thoroughly understand the conservation and scientific needs of...
Antarctic Traveler’s Code for Visitors and Tour Companies

Antarctic visitors

- MUST NOT leave footprints in fragile mosses, lichens, or grasses.
- MUST NOT dump plastic or other, non-biodegradable garbage overboard or onto the Continent.
- MUST NOT violate the seals’, penguins’, or seabirds’ Personal Space
  - start with a “baseline” distance of: 15 feet (5 meters) from penguins, seabirds, and true seals and 60 feet (18 meters) from fur seals
  - give animals the right-of-way
  - stay on the edge of, and don’t walk through, animal groups
  - back-off if necessary
  - never touch the animals.
- MUST NOT interfere with protected areas or scientific research.
- MUST NOT take souvenirs.

Antarctic tour companies

- SHOULD apply the Antarctic Traveler’s Code to all officers, crew, staff, and passengers.
- SHOULD utilize one (1) guide or leader for every twenty (20) passengers.
- SHOULD employ experienced and sensitive on-board leadership.
- SHOULD utilize vessels that are safe for Antarctic ice conditions.
- SHOULD adopt a shipwide anti-dumping pledge.

Code Pour Voyageurs en ANTIARCTIQUE

Les Visiteurs de l’Antarctique

- NE DOIVENT PAS laisser d’empreintes de pas dans les mousses, lichens et herbes fragiles.
- NE DOIVENT PAS laisser à terre, ou jeter par dessus bord, plastiques ou autres ordures.
- NE DOIVENT PAS empêcher sur “l’espace personnel” des phoques, manchots et autres oiseaux de mer:
  - Commencez par maintenir une distance de base de 5 mètres des manchots, oiseaux de mer en général, et phoques; et 18 mètres des phoques à fournir.
  - Donnez toujours la priorité de passage aux animaux.
  - Ne pénétrerez jamais à l'intérieur de groupement d'animaux mais restez à l'extérieur.
  - Reculez s'il le faut.
  - Ne touchez jamais les animaux.
- NE DOIVENT PAS perturber les endroits protégés ni interférer dans les recherches scientifiques.
- NE DOIVENT PAS emporter d’objets en souvenir.

Les Compagnies De Tourisme En Antarctique

- DEVRAIENT imposer ce "code pur voyageurs" à tous les officiers, équipages, membres du personnel et passagers.
- DEVRAIENT procurer au moins un (1) guide par vingt (20) passagers.
- DEVRAIENT employer les services d’organisateurs dotés de jugement et d’expérience.
- DEVRAIENT utiliser des vaisseaux sûrs et conçus pour les conditions de glace en Antarctic.
- DEVRAIENT adopter une politique générale du nondéversement d’ordure à bord de tour navire.
Richtlinien Für
ANTARKTIS
Reisende

Antarktis Besucher

• **SOLLEN NICHT** Fußabdrücke auf empfindlichen Moosen, Flechten und Gräsern hinterlassen.
• **SOLLEN NICHT** Plastik oder anderen Abfall über Bord werfen oder an Land lassen.
• **SOLLEN NICHT** das von Seehunden, Pinguinen oder andere Seemöwen “Eigene Gebeite” bedrohen:
  • Beginnen Sie mit einer “Grundlinien-Entfernung”:
    Halten Sie einen abstand von 5 meter von Pinguinen, Seemöwen und Seehunden und 18 meter von Pelz Robben.
  • Geben Sie den Tieren das Wege vorrecht.
  • Bleiben Sie außerhalb des Tiergebietes und gehen Sie nicht durch Tiergruppen.
  • Machen Sie Platz wenn nötig.
  • Berühren Sie niemals die Tiere.
• **SOLLEN NICHT** geschützte Gebiete oder wissenschaftliche Forschung stören.
• **SOLLEN NICHT** Andenken mitnehmen.

Antarktis Reise-Gesellschaften

• **SOLLTEN** auf die Anwendung der Antarktis Richtlinien bei allen Offizieren, der Besatzung, dem Stab und den Passagieren bestehen.
• **SOLLTEN** für alle anwesig (20) Passagiere einen (1) Führer oder Leiter gebrauchen.
• **SOLLTEN** erfahrene und einfühlende Reiseleiter an Bord einstellen.
• **SOLLTEN** Schiffe gebrauchen die im antarktischen Eismeer angemessene Sicherheit bieten.
• **SOLLTEN** “Schiffs-weit,” einverstanden sein mit einer “Antiwegwerfer” Verpflichtung.

Normas De Conducta
Para Visitantes En Antartida

Los Visitantes

• **NO** deberán dejar pisadas en las áreas frágiles de musgos, liquenes y otras plantas.
• **NO** deberán botar basura plástica y otros materiales no degradables en el mar o en tierra.
• **NO** deberán invadir el “espacio personal” ocupado por los animales: ocas, pingüinos y otras aves marinas. Al acercarse a los animales deberán siempre acordarse de los siguientes principios:
  • en general, mantener una distancia básica de 5 metros de los pingüinos y otras aves marinas, y focas en general; y 20 metros para las focas peleteras.
  • siempre respetar el derecho al paso de los animales.
  • quedarse siempre alrededor de los grupos de animales, sin penetrar en su medio.
  • retroceder si fuera necesario.
  • nunca tocar a los animales.
• **NO** deberán interferir de manera alguna con áreas protegidas ni con investigaciones científicas.
• **NO** deberán llevar cosas para recuerdos.

Las Compañias Turisticas

• **DEBERAN** aplicar estas normas a todos oficiales, tripulantes, empleados y pasajeros.
• **DEBERAN** emplear un mínimo de un (1) guía por cada veinte (20) pasajeros.
• **DEBERAN** utilizar coordinadores con experiencia para conducir cruceros.
• **DEBERAN** utilizar buques seguros para operaciones bajo condiciones de hielo.
• **DEBERAN** adoptar una política de no botar basura al mar desde sus buques.
Thanks

Oceanites thanks the many Newsletter readers who responded to our direct mail appeal, which assisted our efforts to move the new Antarctic Environmental Protocol to signature. Your contributions were greatly appreciated and helped us achieve our objective.

As readers are aware, there is presently no subscription cost for obtaining The Antarctic Century Newsletter. If you are an interested Antarcticist, we want you on our mailing list. However, this circumstance is intimately tied to the success of our fundraising, which, because of the recession, is going through some difficult times. As a result, we would like to appeal to those of you who can help, to actually do so. To keep our lean Oceanites machine functioning efficiently, please find in the centerfold an envelope for contributing whatever funds you may be able to proffer. We are most grateful for whatever assistance you or friends can provide. Thanks.

Many thanks, also, to the Patagonia Corporation and W.H. Gore and Associates, Inc., for assistance with gear and supplies for the educational expeditions that Oceanites will be hosting during the forthcoming Antarctic tourist season.

NEWS: TREATY UPDATE

Environmental Protocol Signed; Minerals Gap Closed.

Following two boisterous, special meetings earlier in the year, the new Antarctic environmental protocol was signed in Madrid on October 4th. The protocol commits the Antarctic Treaty nations to some ambitious environmental principles and addresses important concerns like waste disposal, marine pollution, and the protection of Antarctic flora and fauna. Of significance, it institutes a system of environmental evaluations for all human activities in Antarctica, thus introducing many countries to the process of environmental impact statements with which we’re so familiar in the United States.

The protocol also mandates a controversial end to the most bitter political debate in Antarctic history — involving possible future oil, gas, and minerals exploitation. The protocol’s solution is a 50-year moratorium on exploitation, which continues unless the parties agree in the future to binding, but as yet unspecified, controls. However, another “unless” clause renders the fix less than perpetual; indeed, it allows any country intent on mining to walk away and conduct such activities without adequate, international regulation and without any agreed-upon environmental standards.

The minerals result is not the “world park” or “permanent moratorium” goal that many sought and it is much different than the standards and procedures the parties initially had intended to govern any future exploitation.

Recapping the history summarized in the last issue of the Newsletter, the Wellington Convention that the parties had been debating began with the premise of a permanent moratorium and said “no by bureaucracy.” It established strong environmental principles and instituted a complicated series of hoops, procedures, commissions, and voting arrangements at every stage. The capstone was a consensus voting requirement that gave any participating country, including the U.S., the means to block a development proposal unilaterally.

But there was a “smoking gun.” The permanent moratorium might lift and mining actually might proceed, assuming skillful lawyers and crafty diplomats successfully parsed the sticky wicket of procedures. This became too unsettling for many in the environmental community. Australia and France reneged on signing Wellington. The “environmentally correct” argument of some advocates was that the Antarctic Treaty system should “just say no” — foreclosing even the possibility of future development.

Positions hardened and the cause célèbre was joined. At a special meeting in Viña Del Mar, Chile, in late 1990, the wide impasse among the parties suggested that the minerals gap would remain unclosed. Even worse, minerals became inextricably linked to the emerging environmental protocol, which was advancing by great leaps and bounds. Without a minerals solution, the whole package might go down in flames. Would a compromise be found?

Some suggested a wholesale merger of Wellington into the protocol, but many still pressed a permanent moratorium/no compromise strategy. The editorial in this Newsletter feared too much attention being paid to a moratorium, be it permanent or time-limited, and not enough to detailed rules that should apply if the ban, for whatever reason, lapsed.

By the time of the special meeting held last June in Madrid, Wellington was buried. A fixed-year moratorium of 50 years became the compromise in vogue, with a consensus vote required to lift the ban. This had the air of permanence because, surely, it wouldn’t be difficult to find at least one blocking country. Opposition elements in the U.S. executive branch then elevated the matter to the White House, where a new U.S. position — the “walkout” clause — was dictated. Whether through weariness or exasperation, the other parties acceded to this last-minute proposal.

From the start of the Wellington debate, the odds were much better than 50-50 that the world wasn’t quite ready to put
Antarctica aside forever. If Wellington was flawed because it potentially allowed mining, the protocol's fix is even more unsettling; mining without any oversight at all. The big gamble is that the world, 50 years from now, will be less inclined to exploit Antarctica. Nonetheless, this brings to roost the fears about not formalizing, in advance, strict controls that would apply in such cases. The walkout result is just as threatening as a lapsed ban.

**Bonn and Hobart Meetings.**

The Treaty Parties met for two weeks, beginning October 7 in Bonn. One major discussion point was the need to implement the Madrid Protocol as soon as possible. Opposition, principally from Argentina, blocked this meeting's attempt to install a permanent Treaty Secretariat. However, discussions will continue and with the amount of administrative work the new protocol likely will require, it is hoped that a Secretariat may become a reality in the not-too-distant future. French and Italian proposals for a tourism annex to the new protocol were defeated, with all parties agreeing to consider the issue further at the November 1992 meeting in Italy. The *The Antarctic Traveler's Code*, sponsored by Oceanites, and its translations were part of a tourism package taken to Bonn by the U.S. delegation and distributed to other delegations.

The parties then met in Hobart, Tasmania, under the aegis of the Antarctic Living Marine Resources Convention. The major outcome was a system of area limitations on krill taking. Other items discussed were: potential overfishing of Antarctic cod; better reporting of krill take by all governments; and the possible decline of wandering albatrosses at breeding sites on South Georgia island.

**Latest Lineup Of Treaty Parties.**

Switzerland and Guatemala are the latest acceding (non-consultative) parties to the Antarctic Treaty System. The new lineup is 26 Consultative Parties and 14 Non-Consultative (non-voting) Parties. The 26 voting countries include: the U.S., the U.S.S.R., France, the United Kingdom, Italy, Belgium, Germany, Poland, Norway, Japan, China, India, South Africa, Australia, New Zealand, Chile, Argentina, Brazil, Uruguay, Spain, Sweden, Finland, the Republic of Korea, Peru, Netherlands, and Ecuador. The 14 non-voting countries include: Czechoslovakia, Denmark, Romania, Bulgaria, Colombia, Greece, Papua New Guinea, Hungary, Cuba, Democratic People's Republic of Korea, Austria, Canada, Switzerland, and Guatemala.

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**OTHER NEWS:**

**Science**

Satellite data indicate that the worst ozone hole on record emerged this October over Antarctica. There are thirteen years of reliable ozone measurements, and this year's hole is the fourth severe one to develop since 1986, when a significant depletion was first observed. The hole began forming in the late 1970s because of increasing concentrations of ozone-destroying chlorine pollutants — CFCs — in the stratosphere. On the heels of this news, there are further reports that a dramatically high dose of ultraviolet radiation resulted from last year's ozone hole, a level twice as high as normal. This represents the strongest dose of radiation to hit the Antarctic Peninsula since the ozone layer formed about a billion years ago. The 1990 hole began in September and persisted until December, the height of the Antarctic summer. On the worst days, UV radiation levels were twice as bad as the two previous years and worse than levels usually detected over Washington, D.C. (USA) or Chicago, Illinois (USA) in summer. The great concern is the effect the increased doses may be having on plankton and other Antarctic creatures.

The long-term ecological research (LTER) study funded by the U.S. National Science Foundation (NSF) gets a running start during the 1991-92 Antarctic summer season. This ambitious program will attempt to assess the influence of the annual variation in Antarctic sea ice on a number of biotic communities. Principal researchers include: Wayne and Susan Trivelpiece (penguins), William Fraser (seabirds), Langdon Quetin and Robin Ross (krill and fish), Raymond Smith and Barbara Prezlin (phytoplankton and optical analysis).

The 1991-92 season marks the return to Torgerson Island of the Adélie Penguin chicks fledged at the time of the *Bahia Paraiso* sinking in January 1989. As noted in Issue 5 of the *The Antarctic Century Newsletter*, return rates of Adélies is usually low in the best of circumstances, so we await this season's data and any conclusions that might be drawn therefrom. The immediate effects of the spill were restricted to a few kilometers of the wreck. The intertidal zone was most directly affected — macroalgae, limpets, seabirds, sediments, and rocks. With most beaches composed of larger rocks and boulders, there were comparatively few places for the oil to settle and deposit permanently, except on beaches above the surf zone. The ship, though, continues to leak oil slowly and this continued oiling threatens a long-term, low-level fouling of the immediate vicinity. Rumors continue about a Dutch-backed and Argentine-supported project to remove the remaining oil on the *Bahia.*
In March, it was announced by NSF that there has been a second discovery of **fossil dinosaur bones** in Antarctica. The find occurred on Mount Kirkpatrick, about 400 miles from the South Pole and 2,000 miles south of the first find, five years ago on James Ross Island in the Antarctic Peninsula. Geologists David Elliot and Richard Hanson were studying ancient, volcanic rocks at the Mount Kirkpatrick site when they made the discovery. Paleontologist William Hamer, working just a few miles away, was called in to confirm the find. Scientists believe that this discovery confirms that dinosaurs were a global phenomenon. Antarctica is the last continent to yield dinosaur bones. The new fossils came from rock that is 200 million years old. At that time, dinosaurs had just emerged and Antarctica was still part of the great supercontinent Gondwana, attached to South America, Africa, India, and Australia. About 80 million years later, Gondwana broke apart and the continents started drifting toward their present positions.

With respect to the die-off of **king penguins on Macquarie Island** noted in the last issue, information now suggests that an overflight by a Royal Air Force C-130 was responsible. Or, more precisely, that the pilot was influenced to take a “jolly” by someone traveling on board. One of our correspondents notes that, had this occurred in the 19th Century, the responsible parties would have been rewarded for providing penguins for Macquarie’s giant “digesters”; however, these days, says this correspondent, “the hope is that the offender(s) have been hung, drawn, and quartered.”

Sea World Park of California has announced the birth of an **emperor penguin chick**, the first hatched in captivity in five years.

**LOGISTICS AND OPERATIONS**

**Goodbye Endurance, We Love You So!** We sadly report that the British government has decided against returning the ice patrol vessel, **HMS Endurance**, to *The Ice*, after a survey revealed a number of structural problems. This naval vessel, named after Sir Ernest Shackleton’s great ship, has served her country well and supported a vast range of scientific and logistical projects. *Endurance* also was the vessel that provided the platform for many of the photographs that ultimately appeared in *Wild Ice*. As a replacement, the British government will charter the **Polar Circle**, a Norwegian ice breaker that will continue the Navy’s work in support of the British Antarctic Survey activities and a regular program of hydrography and meteorology.

The new research vessel to support the U.S. Antarctic program, the 308-foot *R/V Nathaniel B. Palmer*, will be delivered and begin trials in early 1992. This new ice-classed ship is being constructed by Edison Chouest Offshore, a private construction firm in Louisiana, and is intended to support multi-disciplinary, long-range programs of the U.S. NSF. Enthusiastic scientists, eager to use this new vessel, have begun to sputter a few nicknames for her, the two most often heard so far being “The Cajun Cruncher” and the “Natty B.”

**Greenpeace** denies rumors that the organization is planning to dismantle its McMurdo Sound station immediately. “But it will happen,” our source said, explaining that a long-term presence was never intended.

In June, an NSF-operated, C-130 transport plane made a daring, **midwinter landing** near the McMurdo Station to rescue of a New Zealander suffering from ulcerative colitis. The runway at Williams Field was illuminated by burning kerosene drums.

The dismantling of **South Georgia whaling stations**, particularly the one at Grytviken, which is most often visited by tourists, is rumored to begin during this Antarctic spring and summer.

**NEW SHIPS AND TOURISM**

The 1990-91 season ended with the tragic crash of a Chilean jetliner transporting passengers to the Society Islands in Puerto Williams, Chile. Nineteen persons were killed when the plane skidded off the runway and into the Beagle Channel. There were valiant and ceaseless efforts by the Explorer’s expedition staff and crew and Chilean Navy personnel to save the drowning passengers.

**BOOKS, PUBLICATIONS, AND OCEANITES NEWS**

Expected in early winter from the Carolina Biological Supply Company is a biology reader entitled **Antarctica**, written by Ron Naveen. . . . Ron and Oceanites also consulted with the Chicago Museum of Science and Industry regarding the new **IMAX-Omnimax film on Antarctica**, which debuted in Washington and Chicago in October. The movie will begin appearing in many other locations worldwide by next summer, and already has received 1st Prize in a film competition in Paris. . . .

Oceanites’ co-sponsored Antarctic book, **Wild Ice**, co-written and co-photographed by Ron Naveen, has become the Press’ best seller. The German-language edition has just been published, with French- and Dutch-language versions on the way. If you haven’t yet obtained your copy, U.S. -based orders may be placed by sending a $40 check (per copy) to Oceanites. The cost includes UPS postage and handling. . . . In association with Travel Dynamics, Inc. and Cruises Unlimited, Littleton, Colorado (US), Ron Naveen and Oceanites will be hosting a series of educational Antarctic expeditions beginning on January 14, 1992. Please contact Oceanites for further details. . . . The Oceanites-sponsored conference, last January, on African wildlife and pastoral peoples issues was mentioned favorably in Paul Grimes’ column in the November 1991 issue of Condé Nast Traveler. . . . The Oceanites **Antarctic Traveler’s Code** is prominently displayed in the Minnesota Science Museum’s Antarctica Exhibit. The exhibit moves to Columbus, Ohio (USA) early in 1992.
the location just visited? Are these tourists destined to continue proselytizing about their experiences? Will they encourage others to visit these locations, or contribute to conservation organizations — there, or back home, which work on that location’s problems?

At this early stage, with ecotourism just a small part of a huge industry, positive results are elusive, especially considering ecotourism’s necessary ties to a fickle economic base. In my opinion, however, the political pressure generated by the Treaty parties will keep the Antarctic tour operators focused on their clean and green commitment. Nonetheless, there are ominous signs going the other way. With finances squeezed, I sense a pre-season tension quite unlike anything I’ve noticed before. If a company is about to go “belly-up,” there will be inordinate concerns by staff about shipboard essentials, let alone their own paychecks. Then again, with the experienced operators, there is resilient staff pride that, even in the worse of developments, leaves much confidence that the trips will stay clean, green — and safe.

The ecotourism movement of vendors promoting sensitive travel to Antarctica and elsewhere will continue to grow. But for now, it is hardly an entrenched phenomenon. Until the collective demand of sensitized passengers becomes a much, much stronger force in the industry, the achievements of ecotourism will continue to rest on a slim foundation, with a long distance still to go.
"Zodiac Antarctic Pilots" Rene Preller, Mike Messick and Julio Preller move into position to receive passengers for another landing.

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