

# CHAPTER 4

## BEHAVING

### WHILE YOUR'RE DOWN THERE

The Antarctic is a vast area, including all lands and ice shelves south of 60°S. The Antarctic Treaty, signed by those listed below, declares the Antarctic to be a preserve open for scientific investigations, but where any military activity is banned. During the International Geophysical Year (1957-58), the U.S.A. invited all the countries that were active in the Antarctic at that time to develop and ratify the Treaty.

#### *Ice Cold Facts*

##### *Who's doing work down there?*

By 1957, over 50 research stations had been established in the Antarctic – they are owned by 12 different countries!

Twelve nations, listed in the preamble to the Treaty, signed the Antarctic Treaty on December 1, 1959 at Washington, D.C. The Treaty entered into force on June 23, 1961. They included Argentina, Australia, Belgium, Chile, France, Japan, New Zealand, Norway, Russia, South Africa, United Kingdom and USA. Of these all but Belgium, Japan, Russia, South Africa and the USA have filed land claims in anticipation of exploitive opportunities that might arise in the future.

As of May 2000, 16 additional nations (Brazil (1975), Bulgaria (1978), People's Republic of China (1983), Ecuador (1987), Finland (1984), Germany (GDR - 1974 and FRG - 1979), India (1983), Italy (1981), Netherlands (1967), Peru (1981), Poland (1961), Republic of Korea (1986), Spain (1982), Sweden (1984), Ukraine (1992) and Uruguay (1980)) have achieved consultative status by acceding to the Treaty and by conducting substantial scientific research in Antarctica.

Another 18 nations have acceded to the Antarctic Treaty – Austria (1987), Belarus (2006), Canada (1988), Colombia (1989), Cuba (1984), Czech Republic (1962), Democratic Peoples Republic of Korea (1987), Denmark (1965), Estonia (2001), Greece (1987), Guatemala (1991), Hungary (1984), Papua New Guinea (1981), Romania (1971), Slovak Republic (1962), Switzerland (1990), Turkey (1996) and Venezuela (1999). These nations agree to abide by the Treaty and may attend consultative meetings as observers.

The Treaty is an encompassing document that covers a range of issues. A summary of some of its key elements follows:

Article	Details
Article 1	Military activity banned; peaceful endeavours permitted
Article 2	Scientific investigation and cooperation to continue
Article 3	Free exchange of information and personnel encouraged
Article 4	Sovereignty claims are not recognized
Article 5	Nuclear test or disposal of nuclear waste prohibited
Article 6	Defines area of coverage as all land and ice shelves south of 60
Article 7	With advance notice, all signatories have free access to all stations, installations and equipment
Article 8	Signatory states have jurisdiction over their own personnel
Article 9	Consultative meetings will be ongoing
Article 10	Any nation acting contrary to the Treaty will be discouraged by the other members
Article 11	Disputes to be settled peacefully by parties concerned or by the International Court of Justice
Article 12-13	Deals with upholding, interpreting and amending the Treaty. Article 12 states the Treaty may be reviewed after 30 years. No country called for a review or amendment, so it continues in force with no limitation.

## CHAPTER 5

# PENGUINS, SEALS, KRILL AND TUSSAC GRASS

When one thinks of Antarctic wildlife, one generally envisions the exotic and unknown. Few have ever seen or even heard of most of the birds and mammals you will encounter on your adventure. But don't be daunted as you will be guided and instructed by experts who will teach you as much or as little as you want!

### *Ice Cold Facts*

90% of the World's ice and snow is found on the Antarctic continent.

Only about 0.5% of Antarctica is ice free – even in the summer!

The vast majority of the ice-free areas are found on the Antarctic Peninsula and therefore quite naturally most of the wildlife is also found here.

Unlike anywhere else in the world, wildlife in the Antarctic specifically seek out rocky outcrops. The reason why is pretty simple – you have two choices – rock or ice! Natural soil is virtually non-existent so that is not an option. Rock is stable and warmer than the ice, so all animals utilize it as the substrate for their preferred nesting and resting sites.

## Antarctica - First Journey

Birds	Species	Antarctica	Falkland Islands	South Georgia
Shags and Cormorants	Antarctic shag	X		
	Imperial (Blue-eyed) shag		X	
	Rock shag		X	
	South Georgia shag			X
Skuas	Brown/Subantarctic skua	X	X	X
	South Polar skua	X		
Terns & Gulls	Antarctic tern	X		X
	Arctic tern	X	X	X
	Dolphin gull		X	
	Kelp gull	X	X	X
	South American tern		X	
Landbirds	Tussockbird		X	
	South Georgia pipit			X
	Striated caracara		X	

Mammals	Species	Antarctica	Falkland Islands	South Georgia
Baleen Whales	Blue whale	X	X	X
	Fin whale	X	X	X
	Humpback whale	X	X	X
	Antarctic minke whale	X	X	X
	Sei whale	X	X	
	Southern right whale	X	X	X
Toothed Whales and Dolphins	Arnoux's beaked whale	X	X	X
	Commerson's dolphin		X	
	Hourglass dolphin	X	X	X
	Long-finned pilot whale	X	X	X
	Orca (killer) whale	X	X	X
	Peale's dolphin		X	
Eared Seals	Sperm whale	X	X	X
	Antarctic fur seal	X	X	X
	South American fur seal		X	
True Seals	South American sea lion		X	
	Crabeater seal	X		
	Leopard seal	X	X	X
	Southern elephant seal	X	X	X
	Weddell seal	X		X
Ross seal (rare)	X			



Fin whale



A chinstrap penguin shares the beach with two gentoos

# MARINE MAMMALS – DOLPHINS & PORPOISES

## *Ice Cold Facts*

Killer whales (Orcas) are not actually whales! They are in fact dolphins. Their large size and aggressive behaviour, as stealthful hunters, does not seem befitting of a playful dolphin, so most people incorrectly call them whales.

New research indicates there may be as many as four species of killer whales worldwide. One of these is unique to the Antarctic where it hunts seals and penguins and even whales – the minke whale seems to be a popular snack!

## *Let's take a closer look at these animals...*

Smaller cousins to the whales, 33 species of dolphins and 6 porpoises range worldwide in both salt and fresh water. Like the whales, they have a blowhole on top of their heads for breathing and live a truly aquatic life, never coming ashore. Nine dolphins and two porpoises ply the southern Polar and Subpolar waters near South America and Antarctica.



Commerson's (*top*) and Hourglass Dolphins

### *Fun Faunal Facts*

All breeding by Weddell seals occurs under the ice!

When approached, Weddell seals roll onto their backs unlike crabeater seals, which open their mouths, bare their teeth, and snort.



Weddell seal

South American sea lions are gregarious and noisy neighbours that establish small, smelly breeding colonies along South America's southern rocky coasts. Sexually dimorphic (i.e. the sexes are different in appearance or size), the large males dominate their harems and aggressively fight off intruders and competitors. They are agile swimmers that prefer slow moving, near-shore prey, such as hake, anchovy, squid and octopus.

### *Fun Faunal Facts*

#### *What is the difference between leucism, melanism and albinism?*

Melanism refers to conditions where there is an excess of dark pigment (melanin), and where the light parts of the plumage are replaced with dark. Albinism refers to situations where there is no melanin at all and is typified by whitish plumages and pink soft parts. Finally, leucism implies a reduction of melanin and all other pigments. A bird showing this condition would appear washed out, where the blacks and dark browns appear as light browns.

#### *Isabelline Penguins*

Leucistic penguins are sometimes called Isabelline penguins. This originates from Austrian lore, where Archduchess Isabella vowed to wear the same undergarments until her husband, Archduke Albert, successfully united the northern and southern Low Countries by taking the City of Ostend.

Apparently it took him three years to accomplish this and hence her underwear became somewhat soiled and brown in colour – like the birds!





### *Ice Cold Facts*

Although geographically, one would expect Magellanic penguins to be most closely related to the Humboldt and Galapagos penguins, surprisingly they are more closely aligned with the African penguin!



### **Rockhopper penguin**

This is the smallest “crested” penguin at 61 cm. (24”), which looks like a bird having a bad hair day! About 1.1 million, of the world’s 3.7 million, pairs breed throughout the Subantarctic islands and mainland South America. Their reproductive behaviour is not as neatly defined as other penguins, as their breeding colonies are interspersed more frequently with those of other species of birds, including black-browed albatrosses. Habitat preferences vary from scree slopes to rocky shores to tussac grass fields. The monogamous pair bond is strong and breeding lasts from October to March, with two eggs being laid. One young usually perishes shortly after hatching and the surviving one is cared for equally by both parents. Based on genetic differences, the rockhopper may



► **Kelp goose** – males (white with bright orange legs) and females (black and white barred) are quite different looking (i.e. sexually dimorphic); found on mainland South America and the Falklands; nests October to November on ground in rudimentary grass-lined nest, where it lays 5-8 eggs that are incubated for about four weeks; young fledge in 9-10 weeks.

► **Ruddy-headed goose** – males and females are similar in colour (brown and tan); threatened on mainland South America, but holding its own in the Falklands; nests September to November on the ground or in Magellanic penguin burrows in rudimentary grass-lined nest, where it lays 5-8 eggs that are incubated about four weeks; young fledge in 9-10 weeks.



*Well, that's it - you're ready - get on out there  
and enjoy this rich and diverse wildlife  
experience! You will not be disappointed!*



Subantarctic/Brown  
(South Georgia) skua