ABOARD&ASHORE Noble Caledonia

PATAGONIAN ODYSSEY

GARIBALDI FJORD, CHILE Arrive: 1100 Depart: 1300

YOUR DINING

Self-service Tea & Coffee The Club	24 hrs
Early Risers' Breakfast Pastries available in the Club	0700-0730
Breakfast Restaurant & Lido <i>(weather perm</i>	0730-0900 nitting)
Late Risers' Breakfast Restaurant only	0900-0930
Club Bar Menu The Club	1100-1600
Lunch Restaurant & Lido <i>(weather perm</i>	1230-1400 nitting)
Afternoon Tea The Club	1600-1645
Cocktail Hour The Club	1830-1930
Dinner Restaurant & Lido (weather perm	1930 hitting)
OPENING HOURS	
Reception: Tel: 301	0600-2300
Hospital:	24 hours
Contact Reception for an appoint	ment.
Emergency: 24 hours – dial 5	500 (Bridge)
The Club Cocktail of the Day: Bloody Mary	1000-Late
Beauty Salon Please book with Teresa via Rece to view the range of treatment massage, hairdressing and treatments.	0900-1900 ption or ask s, including d beauty
Contact Numbers: Reception: +1 95	54 672 6785
TIME ZONE: GMT – 3	
CURRENCY - Chilean Peso £1 = 1,200 CLP US\$1 = 968 CLP	

WEATHER:

9°C to 12°C Cloudy with a moderate breeze and the chance of rain.

FRIDAY 8th MARCH 2024

Sunrise: 0719 Sunset: 2022

Today, we are in one of Chile's newest and largest national parks: Parque Nacional Alberto de Agostini (more than 9,000 km² or 5,600 sq mi), also a UNESCO Biosphere Reserve because of its swathes of distinct ecosystems and special landscapes. The centrepiece of the park is the Cordillera Darwin, whose slopes drop

precipitously to the sea. The valleys not filled by the sea are covered by glaciers, which also occupy small high plateaus.

The **Garibaldi Fjord** is a narrow passage in the Chilean Fjord system strewn with floating ice of all shapes and sizes. Ribbons of waterfalls snake down the steep mountainsides and a rich ecosystem of plants and wildlife has evolved. As we sail the fjord, watch out for Andean Condors, Sea Lions, and Magellanic Penguins.

EXPEDITION MORNING IN GARIBALDI FJORD

0715 *MS Island Sky* enters the fjord to view the **Pía East Glacier** from the ship before continuing to Garibaldi Fjord at about 0900.

We hope to offer a **ZODIAC CRUISE** through the majestic sea, ice and landscape of **Garibaldi Fjord**, weather, wind and sea state permitting

To help us optimize the loading of Zodiacs, we kindly ask you to let us know if you are **NOT** joining us for this excursion (**'NO-GO List'** at Expedition Desk).

- 1130 STARBOARD side cabins (even-numbered cabins).
- **1145 PORT side cabins** (odd-numbered cabins)

1430 Documentary: 'Around Cape Horn' (~35 minutes)

Screened in the Lounge (or Channel 35 on your TV). This must-see documentary has wonderful images and video footage of Captain Irving Johnson's 1929 sailing of the tall ship *Pekin*g around famous Cape Horn (narration by Captain Irving Johnson in 1980). Not to miss!

- **1530** Come and join **Wendy on the Lido Deck for "Shipilates",** a 30 minute session of breathing, stretching and strengthening exercises done from a seated position.
- 1700 Please join Damon in the lounge for his lecture, "The South American country with no monkey the making of Chile". Damon overviews the geology, nature & history of this unique country.
- **1900 Recap and Briefing.** Join the Expedition Team in the Lounge for a recap on some of the things we have seen so far on our voyage as well as a briefing on our plans for tomorrow.

After dinner (about 2115) come and join the expedition Team in the Club for a fun Quiz. Teams of 2 to 6 people. Prizes to be won!

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THE PATAGONIAN ICE SHEET was a large elongated and narrow ice sheet that covered all of Chile south of approximately present-day Puerto Montt during the Llanquihue glaciation. Some maps have the Patagonian Ice Sheet connected to the icecaps of the Altiplano by continuous glaciers all the way through the Andes.

The ice sheet extended beyond the crest of the Andes into Argentina, but because of the dryness of the climate it did not reach beyond present-day lakes such as the Yagagtoo, Musters, and Colhue Huapi. At its peak (about 18,000-17,500 years ago), the Patagonian Ice Sheet covered about 480,000 km² of land with an estimated ice-volume of more than 500,000 km³, of which about 4% remains glaciated today in two separated portions known as the Northern and Southern Patagonian Ice Fields. The ice-volume reduction contributed to a global sea-level rise of about 1.2 meters. However, during the first glacial period at the beginning of the Pleistocene ice extended to the present-day Argentine coast. With each successive glaciation it is known that the ice has stopped further and further to the west, with aridity always serving as the decisive factor halting glacier spread: it is believed that the east-west precipitation gradients during glacial periods were even steeper than the extremely steep ones of present-day Patagonia.

Unlike the Laurentide Ice Sheet or the ice sheets of Northern Europe, the Patagonian Ice Sheet did not cause major extinctions or loss of biodiversity. This is because the flora remaining to the north of the ice was isolated by the Atacama Desert and was able to speciate easily wherever suitable microclimates occurred. In fact, most of the original Antarctic flora survives today on land occupied by the ice sheet. However, there are indications that during the last deglaciation (17,500 years ago), the rapid melting of the northernmost extension of the Patagonian Ice Sheet resulted in a dramatic release of freshwater to the adjacent ocean, decreasing its salinity and altering its circulation, resulting in significant ecological changes both locally and remotely.

The Southern Patagonian Ice Field, located at the Southern Patagonic Andes between Argentina and Chile, is the world's second largest contiguous extrapolar ice field. It is the bigger of two remnant parts of the Patagonian Ice Sheet, which covered all of southern Chile during the Last glacial period, locally called the Llanquihue glaciation.

The Southern Patagonian Ice Field extends from parallels 48°20′S to 51°30′S for approximately 220 miles, and has an area of 6,500 sq miles, of which roughly 5,400 sq miles fall within Chile and 970 sq miles within Argentina. The ice mass feeds dozens of glaciers in the area, among which are the Upsala, Viedma and Perito Moreno in the Los Glaciares National Park in Argentina, and the Pío XI Glacier or Bruggen Glacier (the largest in area and longest in the southern hemisphere outside of Antarctica), O'Higgins, Grey and Tyndall in Chile. The glaciers going to the west flow into the fjords of the Patagonian channels of the Pacific Ocean; those going to the East flow into the Patagonian lakes Viedma and Argentino, and eventually, through the rivers de la Leona and Santa Cruz, to the Atlantic Ocean.

An important part of the ice field is protected under different national parks, such as the Bernardo O'Higgins and Torres del Paine in Chile, and the aforementioned Los Glaciares in Argentina. There are two known volcanoes under the ice field; Lautaro and Viedma. Due to their inaccessibility they are among the least researched volcanoes in Chile and Argentina.

Thorough explorations include the expeditions of 1913–14, 1931, 1955–56 1960–61. First full (North-South) crossing of the field was accomplished in 1998 by Pablo Besser, Mauricio Rojas, José Montt and Rodrigo Fica. Nevertheless some areas of the field remain largely unexplored. From the air, initial exploration was conducted in 1928-9 by Gunther Plüschow after whom a glacier is named. It was further studied in 1943 by aerial photographs made by the United States Air Force on request of the Chilean government.

Border: Fifty kilometres of the Chile–Argentina border, between Mount Fitz Roy and Cerro Murallón, remain undefined on the ice field.

This Southern Patagonian Ice Field section of the border is the last remaining border issue between Chile and Argentina. On 1 August 1991 the governments of Chile and Argentina agreed on a borderline, but the agreement was never ratified by the Argentine parliament. Later, in 1998, both governments explicitly agreed that the line would run along the high peaks and watershed (as specified in their 1941 treaty) northward from Cerro Murallón to a point on a line of latitude due west of "Section B" that was specified in the 1998 agreement a few km southwest of Mt. Fitz roy. However, they also agreed that final demarcation and exact location of the line there would wait until completion of a detailed 1:50,000 scale map of the area and further negotiations. To date, this one section remains the final non-concluded boundary section and an occasional irritant in Argentina-Chile relations.