HISTORICAL TIMELINE of ANTARCTIC EXPLORATION

PERMANENT STATIONS (1944 - 1958) Robert Headland's Treaty Period (1959 - 1987) Stages of Exploration CONTINENTAL PENETRATION - HEROIC AGE —— WHALING PERIOD (1919 - 1943)—— SEALING PERIOD (1780 - 1892) Terra Australis REGULATORY PERIOD (1988 - Present) 1770 1780 1790 1800 1820 1850 1870 1900 1930 1950 1810 1830 1840 1860 1890 1920 1940 1960 1910 1880 British exploring expedition under James Cook (Second Voyage). Ships: Resolution & Adventure. Circumnavigated Antarctica. First to cross Antarctic Circle (Jan 17, 1773). Furthest South: 71°10'S. British sealing voyage under James Weddell. Ships: Jane & Beaufoy. Three voyages. Explored & charted South Orkneys. Discovered Weddell Sea. Furthest South: 74°15'S. Smith & Bransfield. Britain. Ship: Williams. Wm. Smith first sighted South Shetlands Feb 19, 1819. Returned with Ed. Bransfield. Sighted Livingston, Deception, Elephant, Clarence, King George Islands. Discovered Trinity Land Jan 30, 1820. Russian exploring expedition under Thaddeus von Bellingshausen. Ships: Vostok & Mirnyy. Circumnavigated Antarctic Circle since Cook. Sighted Antarctic Continent Jan 27, 1820. Furthest South: 69°53'S. Discovered Peter I & Alexander Islands. Fanning-Pendleton Sealing Expedition. Ships: Hero, Frederick, Hersilia, Free Gift, Express, Essex. Nathaniel Brown Palmer reports seeing land (Davis Coast) on Nov 16, 1820. American sealing expedition. Ships: *Huron & Huntress*. Logbook of **John Davis**, Capt of *Huron*, reports **First Landing on Antarctic Continent** at Hughes Bay, Feb 7, 1821 British Naval expedition under Henry Foster. Ship: Chanticleer. Scientist William Webster. To South Shetlands to make pendulum & magnetic observations. Roughly charted Palmer Coast. 1833 Enderby Bros sealing expedition under John Biscoe. Britain. Ships: Tula & Lively. Discovered Enderby Land (first sighting of Antarctica in India Ocean sector) Feb 24, 1831. Discovered Adelaide Is & Graham Land. Third to circumnavigate Antarctica. Furthest South: 69°03'S. 1840 French exploring expedition under Jules-Sebastian Dumont d'Urville. Ships: Astrolabe & Zélée. Discovered Trinity Land, Joinville Is, Adélie Land, Clarie Coast. Met Wilkes Jan 29, 1840. 1838 Enderby Bros sealing expedition under John Balleny. Britain. Ships: Eliza Scott & Sabrina. Discovered Balleny Islands, Sabrina Coast. Sabrina lost with all hands. Furthest South: 69°02'S. United States Exploring Expedition under Charles Wilkes. 1838 Ships: Vicennes, Peacock, Porpoise, Sea Gull, Flying Fish, Relief. First US expedition to Antarctica. Met Dumont d'Urville, Discovered Shackleton Ice Shelf. Surveyed 1600 miles of coastline. Took first dog to Antarctica ("Sydney"). British Naval expedition under Sir James Clark Ross. Ships: Erebus & Terror. Object: Reach South Magnetic Pole. First to sight or enter Ross Sea. 1839 2 Discovered Mts Erebus and Terror, McMurdo Sound, Great Ice Barrier. Circumnavigated Antarctica. Last of the great all-sail polar voyages. Furthest South: 78°9'30"S. 1855 Sealing & whaling voyage under Mercator Cooper. USA. Ship: Levant. Landed "Coast of South Continent." First Landing on Greater Antarctica at Coats Land. British naval voyage under Sir Charles Wyville Thompson. Ship: Challenger, Capt Charles Nares. 1872 Established discipline of oceanography. Circumnavigated the earth. First steam vessel to cross Antarctic Circle. First truly scientific Antarctic expedition. Earliest photographs of icebergs. Furthest South: 66°S. German sealing & exploring expedition under Eduard Dallmann. 1873 Ship: Gronland. First Antarctic German expedition. Discovered Bismarck Strait. First steamship to reach Antarctic coast. Furthest South: 64°45'S. Dundee whaling expedition under Alexander Fairweather & including William Speirs Bruce & others. 1892 Scotland. Ships: Balaena, Active, Diana, Polar Star. Discovered Dundee Is. Object to determine whaling resources of the Peninsula and the Weddell Sea. Norwegian Whaling expedition under Carl Anton Larsen. 1892 Ship: Jason. Explored Erebus & Terror Gulf. Landed & collected fossils on Seymour Is. Discovered Foyn Coast. Furthest South: 64°40'S. Norwegian whaling expedition. Ships: Castor, Hertha and Jason (captained by Carl Anton Larsen). Found petrified wood. 1893 Discovered King Oscar Coast, Foyn's Land, Robertston & Christensen Islands. First ski foray on continent. Furthest South in Weddell Sea since Weddell 68°10'S. Norwegian whaling & sealing expedition under Henrik Bull. Ship: Antarctic. 1893 Object: Seek out whales in the Ross Sea. Borchgrevink collected first vegetation (lichen) below Antarctic Circle. Landing at Cape Adare Jan 24, 1895. Belgian Antarctic Expedition under Adrien Gerlache. Ship: Belgica. International contingent including Amudsen, Cook, Arctowski. First scientific expedition to the continent itself. Belgica trapped in ice March 2, 1898; released March 14, 1899. 1899 Discovered Gerlache Strait, Brabant, Anvers, Liege, Wiencke Islands. First scientific expedition to the continent itself. Belgica trapped in ice March 2, 1898; released March 14, 1899. 1899 Discovered Gerlache Strait, Brabant, Anvers, Liege, Wiencke Islands. First to spend a winter so far south. Furthest South: 71°30'S and 1899. 1899 Discovered Gerlache Strait, Brabant, Anvers, Liege, Wiencke Islands. First to spend a winter so far south. British Antarctic Expedition under Carsten Borchgrevink. Ship: Southern Cross. Base: Cape Adare. Object: South Magnetic Pole. First sledge journey on Ross Ice Shelf. First use of dogs, Primus stoves and kayaks in Antarctic. First human death/burial in Antarctic. GERMAN NATIONAL ANTARCTIC EXPEDITION under Erich von Drygalski. Ship: Gauss. 1901 Discovered Wilhelm II Coast. Second use of a balloon. Gauss iced in from February 1902 to March 1903 (used ashes & garbage to melt ice). SWEDISH SOUTH POLAR EXPEDITION under Nils Otto Nordenskjold. Ship: Antarctic. Bases: Snow Hill Is, Paulet Is, Hope Bay. First to winter over in Peninsula. 1901 1904 Ship crushed by ice & sank Feb 12, 1903. Great adventures; amazing coincidences. Under appreciated. Furthest South: 63°30'S. British National Antarctic Expedition under Robert Falcon Scott. Ship: Discovery, later Morning & Terra Nova. Base: Hut Point. Discovered King Edward VII Land. First balloon ascent Feb 4, 1902. Polar party of Scott, Shackleton & Wilson leaves Nov 2, 1902; returns Feb 2, 1903. 1901 Furthest South: 82°16'33. Western Mountains party under Armitage. Cape Crozier journey. South Polar Times issued. Scottish National Antarctic Expedition under William Speirs Bruce. Ship: Scotia. Base: Omond House, So Orkneys. 1902 Wintered over. Discovered Coats Land. First Antarctic bagpiper. First motion pictures taken. Furthest South: 74°01'S. French Antarctic Expedition under Jean-Baptiste Charcot. Ship: Français. Original objective: Arctic. Instead went south to rescue Nordenskjold. 1903 Charted much of the Peninsula. Discovered Port Lockroy. Wintered over at Port Charcot, Booth Is. Pet pig named Toby. Furthest South: 65°05'S. British Antarctic Expedition under Ernest Shackleton. Ship: Nimrod. Base: Cape Royds. Object: South Pole. First automobile in Antarctic. First ascent of Mt Erebus. Shackleton, Adams, Marshall & Wild leave for Pole Oct 29, 1908. 1909 Achieved Furthest South, 97 miles from Pole, Jan 9, 1909. Western and Northern Parties. *Aurora Austalis* produced. French Antarctic Expedition under **Jean-Baptiste Charcot**. Ship: *Pourquoi Pas?* Wintered over at Port Circumcision, Petermann Is. Charted Adelaide Is. Sighted Alexander I Is. Discovered Charcot Land. Norwegian Antarctic Expedition under Roald Amundsen. Ship: Fram. Base: Framheim. Polar party of Amundsen, Bjaaland, Hassel, Hanssen & Wisting depart Oct 20, 1911. **REACH SOUTH POLE** Dec 14, 1911. Arrive back at Framheim Jan 26, 1912 JAPANESE ANTARCTIC EXPEDITION under **Nobu Shirase**. Ship: *Kainan-Maru*. Visited Ross Ice Shelf. Established base 2 miles east of Framheim. Sledge party to Victoria Mountains. "Dash Patrol" set out Jan 20, 1912. Furthest South: 80°05'S BRITISH ANTARCTIC EXPEDITION under Robert Falcon Scott. Ship: Terra Nova. Base: Cape Evans. Campbell's Northern Party to Cape Adare, later at snow cave at Terra Nova Bay. Taylor's Western Geological Party. Two journeys to Western Mountains. "Worst Reach South Pole Jan 17, 1912. Last three die ca. Mar 29, 1912, 11 miles from One Ton Deport Journey in the World" to Cape Crozier (Wilson, Bowers Cherry-Garrard). Polar Party departs Oct 26, 1911. Final five: Scott, Wilson, Bowers, Evans & Oates die on return from the Pole GERMAN SOUTH POLAR EXPEDITION under Wilhelm Filchner. Ship: Deutschland. Object: Determine existence of Ross-Weddell Graben. Discovered Filchner Ice Shelf, Luitpold Coast. Ship frozen in from Mar 6 to Nov 26, 1912. Australasian Antarctic Expedition under Douglas Mawson. Ship: Aurora. Base: Cape Denison & "The Grottoes" (1500 miles apart). Windiest place in the world. Mawson, Ninnis & Mertz sledge trip results in death of latter two, heroic return of Mawson. 1914 2000 miles of coastline charted. First use of airplane (on ground only) and radio. First Antarctic meteorite found. BRITISH IMPERIAL TRANS-ANTARCTIC EXPEDITION under Sir Ernest Shackleton. Ship: Endurance (Ross Sea Party: Aurora). Two parties—Ross & Weddell Sea—with trans-continental crossing planned. Endurance trapped in ice in Weddell Sea Feb 2, 1915. Drifted 573 miles for 10 months. Spencer-Smith, Mackintosh & Hayward die. Shackleton relieves party Jan 10, 1917. over 9 months. Endurance sinks Jan 21, 1915. Arrive Elephant Is April 14, 1916. Arrive So Georgia May 10, 1916. Shackleton, Worsley & Crean arrive Stromness May 20, 1916. Elephant Is party rescued Aug 30, 1916. Ross Sea Party lays depots. Aurora trapped in ice British Imperial Expedition under John Cope. Base: Waterboat Point, Paradise Bay. Actually substantial work program accomplished. SHACKLETON-ROWETT ANTARCTIC Expedition under Sir Ernest Shackleton (later Frank Wild). Britain. Ship: Quest. Main object was to map 2000 miles of coastline, look for lost islands, etc. Shackleton dies in So Georgia Jan 5, 1922. 1921 Expedition continues under Wild. Returned to Elephant Is. Furthest South: 69°17'S. WILKINS-HEARST ANTARCTIC EXPEDITION under Sir Hubert Wilkins. USA & Britain. Ships: Hektoria, William Scoresby. Aircraft: Los Angeles & San Francisco. Object was to fly from Peninsula to Ross Sea. First Antarctic Flight at Deception Is in the 1928 Los Angeles Nov 16, 1928. Furthest South (by plane): 71°20'S. United States Antarctic Expedition (BAE I) under Richard E. Byrd. Ships: City of New York, Eleanor Bolling, Sir James Clark Ross, C. A. Larsen. Aircraft: Floyd Bennett, Stars & Stripes, Virginia. Base: Little America. Best funded private expedition. Gould's Southern Geological Party to Queen Maud Mountains. South Pole Flight by Byrd, Balchen, June & 1928 McKinley Nov 29, 1929. Discovered Edsel Ford Range & Marie Byrd Land British, Australian & New Zealand Antarctic Research Expedition (BANZARE) under Sir Douglas Mawson. Ship: Discovery. Two successive summer expeditions. Re-visited Cape Dennison. Discovered 1000 miles of coast. Flights in Gipsy Moth aircraft. Included Frank Hurley, John King Davis, Scout Marr. 1934 *Polar Star* shipped back to US for repairs. Included Balchen & Wilkins First Ellsworth Antarctic Expedition under Lincoln Ellsworth. USA. Ship: Wyatt Earp. Aircraft: Polar Star. Object: Fly across continent. Polar Star damaged and expedition abandoned. Bolling Advanced Base, 123 miles south of Little America. Nearly died Second Byrd Expedition (BAE II) under Richard E. Byrd. Ships: Bear of Oakland & Jacob Ruppert. Aircraft: William Horlick, Miss America II. Object: Reoccupy Little America II. Object: Reoccupy Little America & explore Marie Byrd Land. First effective use of motor vehicles, covered 12,500 miles. Had 4 cows along. Byrd first man to winter over alone at from carbon monoxide poisoning. Second Ellsworth Antarctic Expedition under Lincoln Ellsworth. USA. Ship: Wyatt Earp. Aircraft: Polar Star. Short flight made along east coast of Trinity Peninsula from Snow Hill Is to Nordenskjold Coast. 1935 Expedition abandoned. 937 Determined that Peninsula part of the mainland. British Graham Land Expedition under John Rymill. Ship: Penola. Bases: Winter Island, later Barry Island. One aircraft. Mostly amateur explorers. Discovered by air George VI Sound. Rymill & Bingham make first land crossing of Peninsula. THIRD ELLSWORTH ANTARCTIC EXPEDITION under Lincoln Ellsworth. Ship: Wyatt Earp. Aircraft: Polar Star. Ellsworth & Hollick-Kenyon fly across Peninsula from Dundee Is to near Little America II, leaving Nov 12, 1935. 2300 miles in 6 stages. Run out of fuel 16 miles from Little America II to where they sledged. Picked up by Wyatt Earp between West Ice Shelf, Wilhelm II Land, and Proclamation Is. Norwegian Antarctic Expedition under Lars Christensen. Ships: Thorshavn & Firern. Charted Dronning Maud Land. Photographed coastline swastikas to claim territory, mostly in Queen Maud Land. GERMAN NEW SCHWABENLAND EXPEDITION, under Alfred Ritscher. Ship: Schwabenland. Aircraft: Boreas & Passat. Aircraft launched by catapault from ship. Dropped aluminum darts with Fourth Ellsworth Antarctic Expedition under Lincoln Ellsworth. Ship: Wyatt Earp. Flight over American Highland. Expedition cancelled after accident. 193 Ellsworth's last Antarctic expedition. Wilkins on all four. United States Antarctic Service Expedition (BAE III) under Richard E. Byrd. Ships: North Star & Bear. Bases: Little America III & East Base set up at Stonington Is. Snowcruiser, gigantic vehicle unsuccessfully used. 2 light US Navy Antarctic Developments Project (Operation Highjump), under Richard E. Byrd. Ships: 13. Aircraft: 33. Base: Little America IV. 4700 men. Larger than all past expeditions put together. First use of helicopters & icebreakers. Byrd flew over South Pole Feb 15, 1947. 350,000 square miles 1946 discovered. 60% of coast photographed Ronne Antarctic Research Expedition, under Finn Ronne. USA. Ship: Port of Beaumont. Aircraft: 3. Base: Stonington Is. For first time included two women. Object: Explore Weddell Sea coastline & mountain ranges of Peninsula. Determined Weddell 1947 8 Ross Seas not connected.

US NAVY SECOND ANTARCTIC DEVELOPMENTS PROJECT (Operation Windmill) under Cdr Gerald Ketchum. Ships: Burton Island & Edisto. Aircraft: 3 helicopters, 1 sea plane. Object: To train personnel & test equipment; to survey 30 major features. Established 1947 1948 Evans & Royds, Little America III & IV.

Norwegian-British-Swedish Antarctic Expedition, under John Giaever. Ship: Norsel. Base: Maudheim. Land traverses & aerial photography of 38,000 square miles of Queen Maud Land. 1949 Truly international in composition.

Ships: Eastwind, Edisto, Glacier, Arneb, Greenville Victory & Wyandot; additional ones during Deep Freeze II. Bases: Little America V & McMurdo. Deep Freeze II. Bases: Little America V & McMurdo. Deep Freeze code name for all subsequent US operations in the Antarctic from another continent. Que Sera Sera lands at South Pole; first people 1956 there since Scott. Commonwealth Trans-Antarctic Expedition, under Sir Vivian Fuchs & Sir Edmund Hillary. Britain, et al. Ships: Theron, Magga Dan, HMNZS Endeavor. Bases: Shackleton (Weddell Sea) & Scott (Ross Island). First successful land traverse of Antarctica. Hillary laid depots from Ross Sea. Arrived at Pole Jan 4, 1958. Fuchs arrived Jan 20, 1958. 2158 miles ¹⁹⁵⁸ in 99 days.

OPERATION DEEP FREEZE I & II, under George Dufek. USA