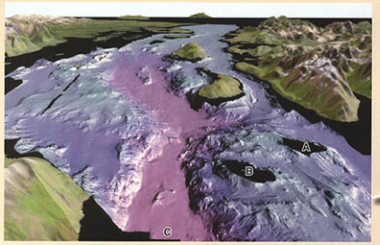
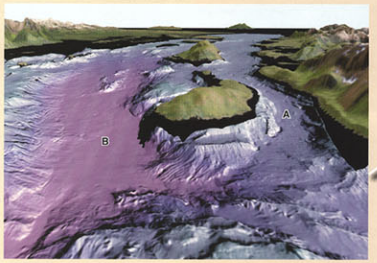
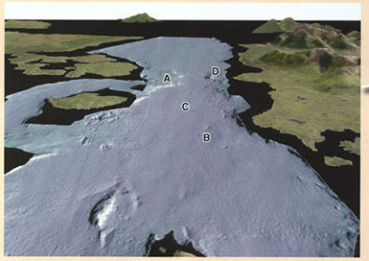
GLACIER BAY NATIONAL PARK, ALASKA



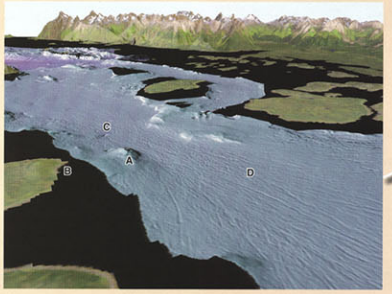
View looking south from the entrance of West Arm of Glacier Bay. The two prominent bedrock highs in the foreground are Geike Rock (**A**) and Lone Island (**B**). The terminus of the Little Ice Age glacier was at the approximate location of (**C**) in the 1860's (see fig. 1, sheet 1). The distance across the bottom of the image is about 10 kilometers (6.2 miles). Vertical exaggeration is 2X.



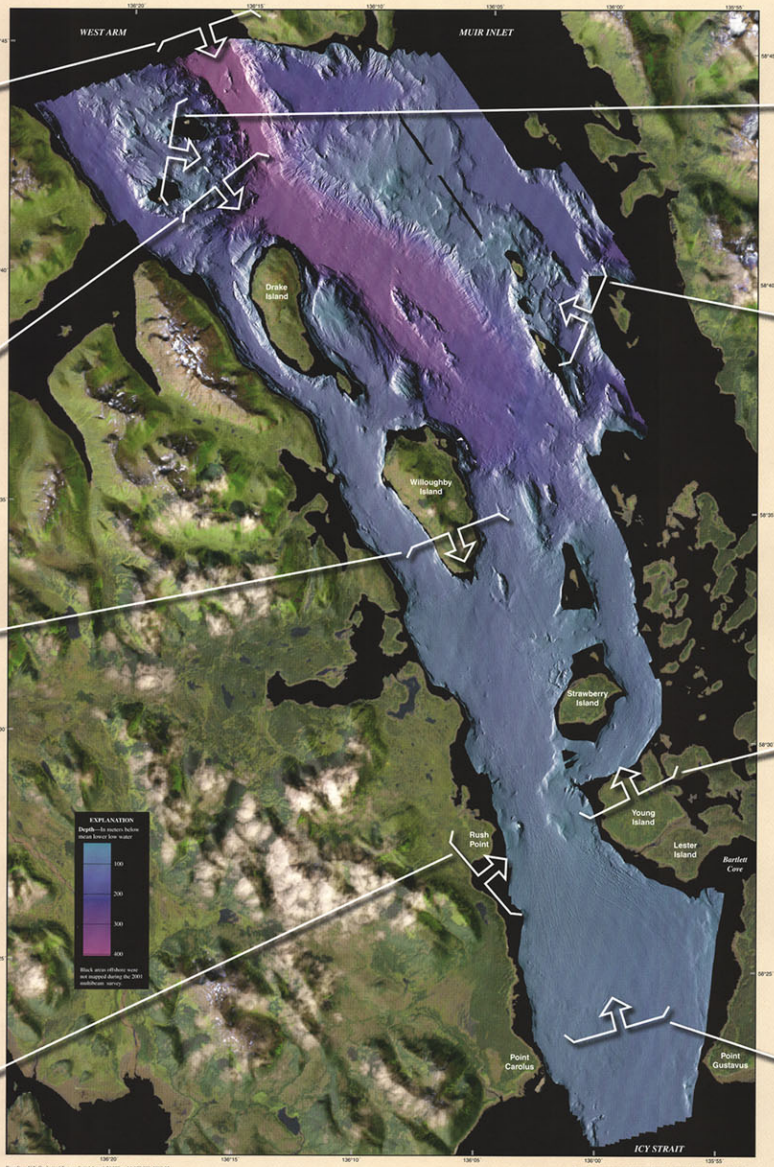
View looking southeast. Whidbey Passage (**A**) runs between Drake Island and the mainland and extends south along Willoughby Island. The Main Passage (**B**) runs east of Drake Island. Whidbey Passage is a glacially carved passage that varies in water depth from 95 to 170 meters (310 to 560 feet) along its axis, whereas the main passage varies in water depth from 250 to 350 meters (820 to 1,150 feet) along its axis in this image. The glacier terminus was located near Willoughby Island in the mid 1800's (see fig. 1, sheet 1). The distance across the bottom of the image is about 5 km (3.1 miles). Vertical exaggeration is 2X.



View looking south from over Willoughby Island toward Sitakaday Narrows (**A**). The entrance to Glacier Bay at Icy Strait is in the distance. Iceberg wallow pits can be seen at (**B**), whereas ice gouges (**C**) extend south through and beyond Sitakaday Narrows. A bedrock knob (**D**) on the west side of the Narrows shoals to about 6 meters (20 feet). The distance across the bottom of the image is about 5 kilometers (3.1 miles). Vertical exaggeration is 2X.



Sitakaday Narrows viewed towards the northeast showing a bedrock knob (**A**) off Rush Point (**B**). Iceberg wallow pits (**C**) and gouges (**D**) show changes in travel paths of icebergs due to tidal current effects. The wallow pits can be as deep as 5 meters (16 feet), whereas the gouges can be as deep as 2.5 meters (8 feet). The distance across the bottom of the image is about 2.5 kilometers (1.5 miles). Vertical exaggeration is 2X.



Base from U.S. Geological Survey digital data, 1:24,000 and 1:100,000, 1969-85
Universal Transverse Mercator projection, Zone 8, NAD84 ellipsoid.

Bathymetry image generated from multibeam-bathymetry data acquired July 2003 by the U.S. Geological Survey in cooperation with the National Park Service, Glacier Bay National Park and Preserve, Alaska. Bathymetry pixel resolution is 5 meters. Depths are in meters below the sea surface, referenced to mean lower low water. Land image generated by combining Landsat-5 imagery (acquired 02/23/1992, bands 1,4,5; 30-m pixel resolution) with shaded relief imagery generated from USGS 3-2-second DEMs.

More information available on World Wide Web at:
<http://pubs.usgs.gov/open-file/of02-391/> [last modified October 31, 2002]

Bathymetry formal metadata available on World Wide Web at:
<http://pubs.usgs.gov/open-file/of02-391/gb-data.html>

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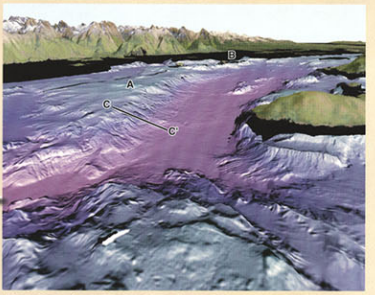
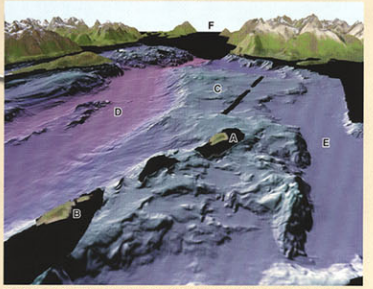
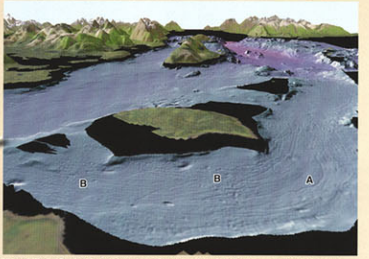
Box 25286, Denver, CO 80225-0286



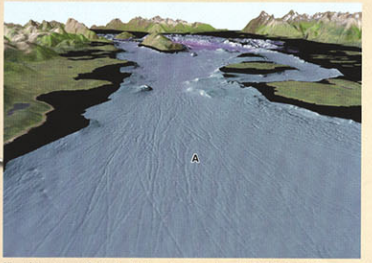
View looking east from the West Arm of Glacier Bay. A bedrock high (**A**) extends northwest from the Marble Islands (**B**). The slope at **C** to **C'** drops from about 100 to 325 meters (328 to 1,070 feet). Drake Island marks the west side of the Glacier Bay main passage. The distance across the bottom of the image is about 3.3 kilometers (2.0 miles). Vertical exaggeration is 2X.



View looking northwest over North (**A**) and South (**B**) Marble Islands. These islands are part of a bedrock high (**C**) that runs northwest to southeast within Glacier Bay. Glacier Bay main passage (**D**) is to the west of the bedrock high, whereas Beartrack Cove deep (**E**) is to the east. The opening to the north (**F**) is the entrance to the West Arm of Glacier Bay (see fig. 1, sheet 1). The distance across the bottom of the image is about 3.5 kilometers (2.2 miles). Vertical exaggeration is 2X.



View of Glacier Bay looking northwest over Strawberry Island. Iceberg gouges (**A**) turn the corner around Strawberry Island and bend southwest towards the main passage. Depressions at (**B**) may be wallow pits formed where iceberg keels moved up and down during one or more tidal cycles. The distance across the bottom of the image is about 4.5 kilometers (2.8 miles). Vertical exaggeration is 2X.



View of the entrance to Glacier Bay looking north. The terminus of the Little Ice Age glacier was at the bottom of this image in 1794 when Vancouver's exploration discovered the glacier (see fig. 1, sheet 1). Linear gouges (**A**) are likely caused by icebergs grounded on the coarse bottom sediment of Sitakaday Narrows (see fig. 2, sheet 1). The icebergs were pushed through the Narrows by tidal currents that reach speeds as fast as 7 knots. The distance across the bottom of the image is about 4.5 kilometers (2.8 miles). Vertical exaggeration is 2X.

MULTIBEAM BATHYMETRY AND SELECTED PERSPECTIVE VIEWS OF GLACIER BAY, ALASKA

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2003