

NOTE: THIS MAP IS NOT INTENDED FOR NAVIGATION

Mercator projection

INTRODUCTION

Much of the seafloor topography in the map area is on the southwest submarine flank of the currently active Mauna Loa Volcano. The benches and blocky hills shown on the map were shaped by giant landslides that resulted from instability of the rapidly growing volcano. These landslides were imaged during a 1986 to 1991 swath sonar program of the United States Hawaiian Exclusive Economic Zone, a cooperative venture by the U. S. Geological Survey and the British Institute of Oceanographic Sciences (Lipman and others, 1988; Moore and others, 1989). Dana Seamount (and probably also the neighboring Day Seamount) are apparently Cretaceous in age, based on paleomagnetic studies, and predate the growth of the Hawaiian Ridge volcanoes (Sager and Pringle, 1990).

BATHYMETRY

Sonar multibeam bathymetry covering most of the area was collected from the National Oceanic and Atmospheric Administration (NOAA) ship Surveyor, R.V. Forster commanding, during August-September 1986 and April 1987 (Fox and others, 1992). The multibeam data was processed by D.H. Herlihy of NOAA's National Ocean Service. Nearshore bathymetry (less than 2,000 m depth) is from single-beam sonar surveys from the NOAA National Ocean Service Hydrographic Database, National Geophysical Data Center. Depth contours are based on an uncorrected oceanic sound speed of 1,500 m/s, and consequently reported depths may deviate slightly from true ocean depths. The small region of subaerial topography on the island of Hawaii in the northeastern part of the map is indicated by a faint brown tone and is based on digital elevation data of the U.S. Geological Survey. The merged data were gridded at 200-m spacing and contoured by computer on a Mercator map projection at a scale of 1:150,000. This map was compiled at the NOAA Pacific Marine Environmental Laboratory, Newport, Oregon. This map is not intended for navigational purposes.

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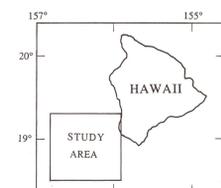
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BATHYMETRY OF THE SOUTHWEST FLANK OF MAUNA LOA VOLCANO, HAWAII

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INDEX MAP SHOWING LOCATION OF STUDY AREA