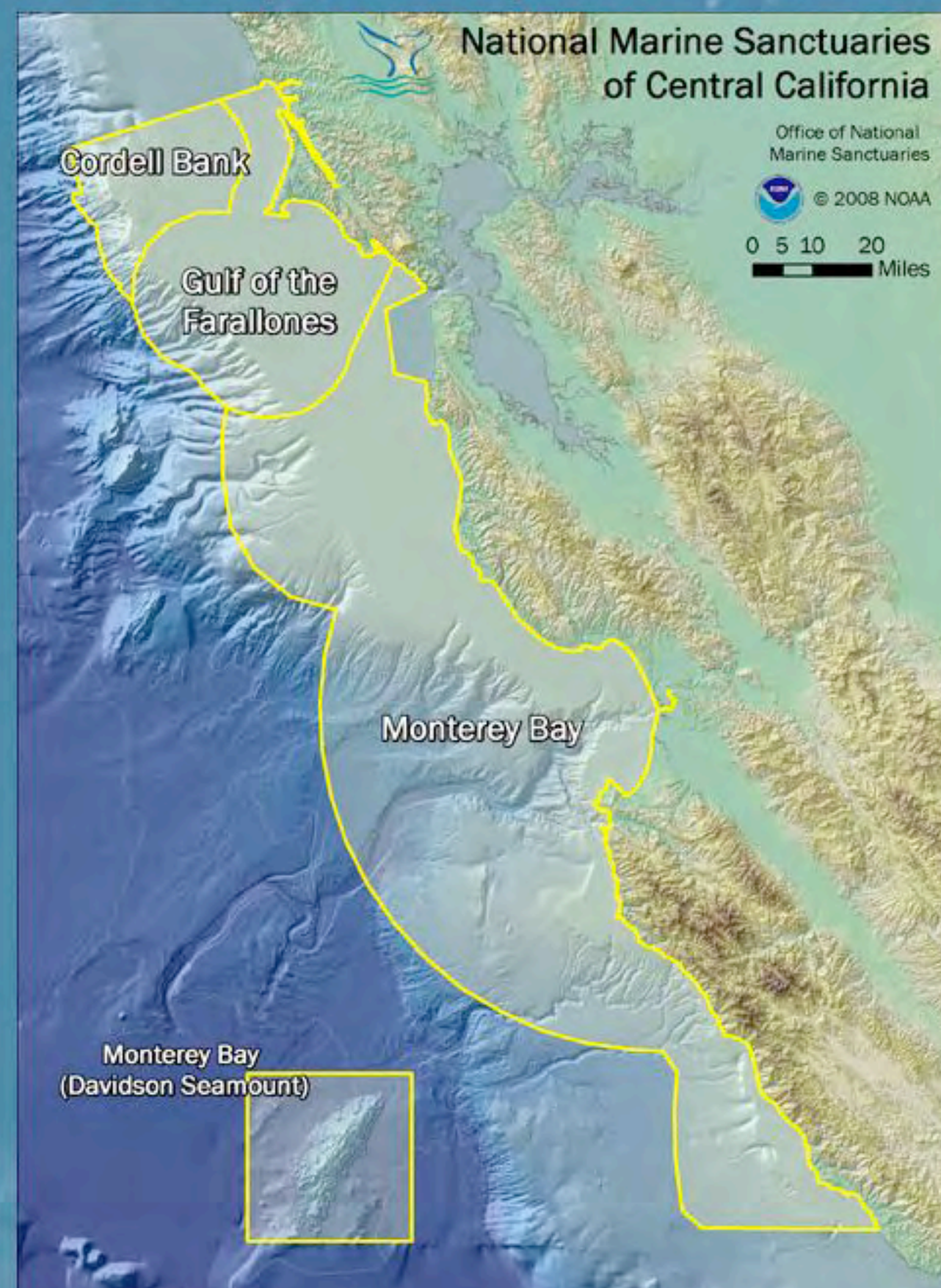


Monterey Bay National Marine Sanctuary Expands to Include Davidson Seamount: Opportunities for Applied Research and Education in a New Marine Protected Area

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Introduction: The Davidson Seamount is now part of the Monterey Bay National Marine Sanctuary (MBNMS) (Figure 1). Located 128 kilometers (80 statute miles) southwest of Monterey, Davidson Seamount rises 2,280 meters (7,480 ft) above the surrounding ocean floor,



measures 42 kilometers (26 statute miles) in length, and yet remains 1,250 meters (4,101 ft) below the sea surface (Figure 2). The inclusion of Davidson Seamount to the MBNMS represents a new and unique opportunity for applied seamount research in a new marine protected area (MPA).

Figure 1: The inclusion of the Davidson Seamount expanded the Monterey Bay National Marine Sanctuary boundary by 775 square statute miles. (Image: Chad King, SIMoN/MBNMS)



Figure 3: An orange basket star (*Gorgonocephalus* sp.) crawls on the newly discovered yellow sponge (*Staurocalyptus* sp. nov.). Several white ruffle sponges (*Farrea occa*), surround the scene along with a new species of white-branched sponge (*Asbestopluma* sp. nov.) on the Davidson Seamount at a depth of 1,316 meters (4,318 feet). (Photo: NOAA/MBARI)



Figure 5 (Right): A blob sculpin (*Psychrolutes phricus*) on the Davidson Seamount at 1,459 meters (4,878 feet). Large specimens often feature circular marks, possibly as a result of altercations with squid or octopuses. (Photo: NOAA/MBARI)



Figure 6 (Left): The bubble gum coral (*Paragorgia arborea*), which are long lived and can grow more than 2 meters (6.5 feet) in height, photographed at over 1,300 meters (4,265 feet) below sea level on the Davidson Seamount. (Photo: NOAA/MBARI)

Available Data: The Davidson Seamount is one of the best-studied seamounts in the world. As a result, there is a wealth of existing information, including:

- Background data & media
 - High-definition videos & images
 - High-resolution maps
 - Geological characterizations
- The Davidson Seamount Taxonomic Guide (Figure 4)
 - 237 taxa
 - Including 15 new species
 - Depth observed
 - Classifications
 - Habitats
 - Midwater
 - Benthic
- Faunal inventory in a relational database
 - Biogeography
 - Habitat preferences
 - Trophic level
- Fixed monitoring transects



Figure 4: Davidson Seamount Taxonomic Guide (cover and sample page).

Why Work at Davidson: In addition to the wealth of existing scientific data readily available on the Davidson Seamount, the MBNMS has released an Action Plan for the Davidson Seamount Management Zone (DSMZ), which mirrors the National Oceanic and Atmospheric Administration's (NOAA's) Deep-Sea Coral and Sponge Research and Management Strategic Plan. The DSMZ Action Plan outlines research and conservation objectives, thus providing a launch pad for applied seamount research and novel research questions. The MBNMS is also developing resources to support research, as well as programs for outreach and education to highlight research findings to the public. So come to the Davidson Seamount for all of your research needs and seamount education material – we're officially open for business.

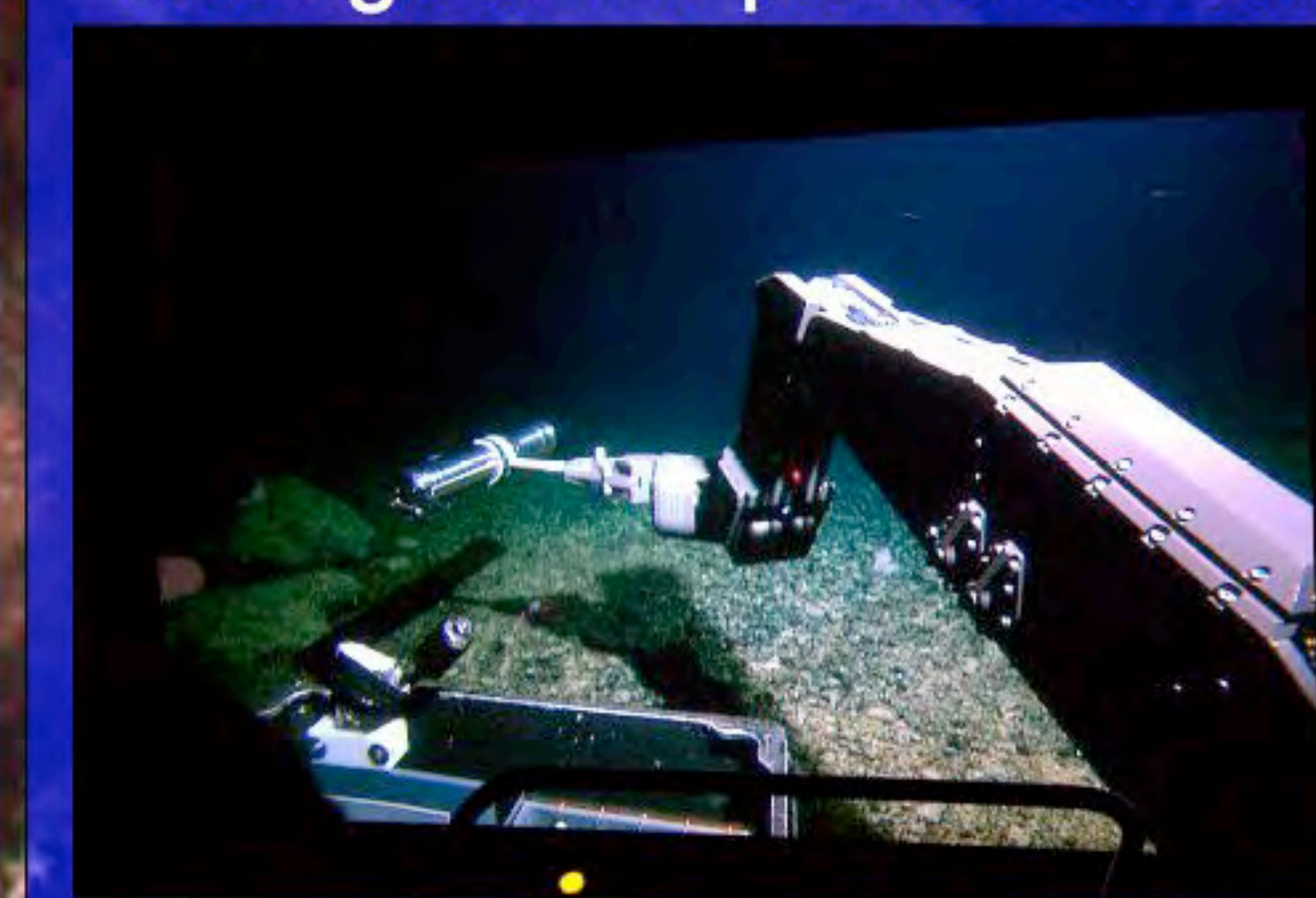


Figure 7: Manipulator arm of the ROV *Tiburon* as seen on a high-definition display aboard the R/V *Western Flyer* during the 2006 MBARI/NOAA Davidson Seamount Expedition. (Photo: Chad King, SIMoN/MBNMS)

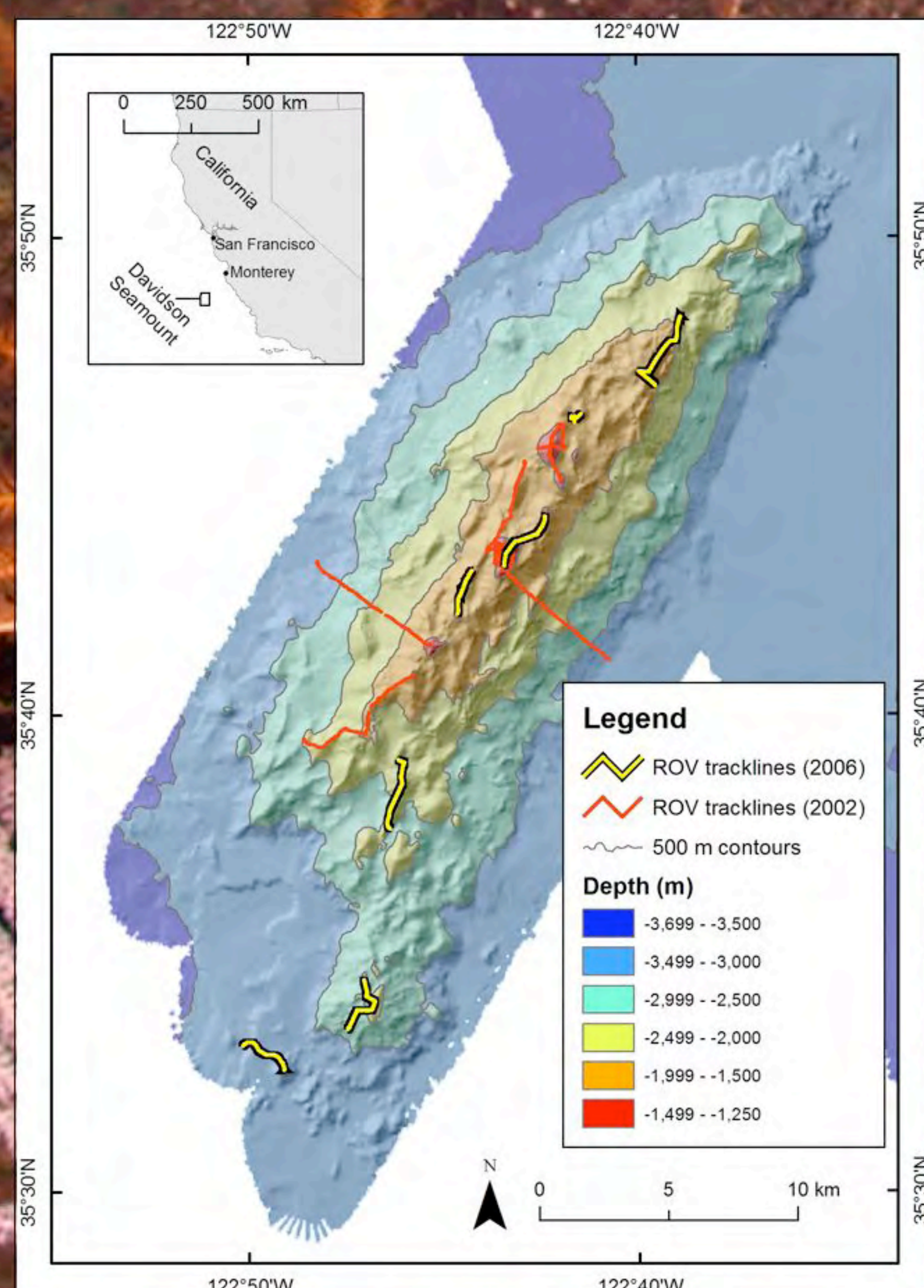


Figure 2: Bathymetric map showing ROV transects on the Davidson Seamount. (Image: Chad King, SIMoN/MBNMS)

Background Photo: Crinoids (*Florumetra serratissima*), deep-sea corals, sea stars, bryozoans, and anemone on the Davidson Seamount at a depth of 2,668 meters (8,753 feet). (Photo: NOAA/MBARI)

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