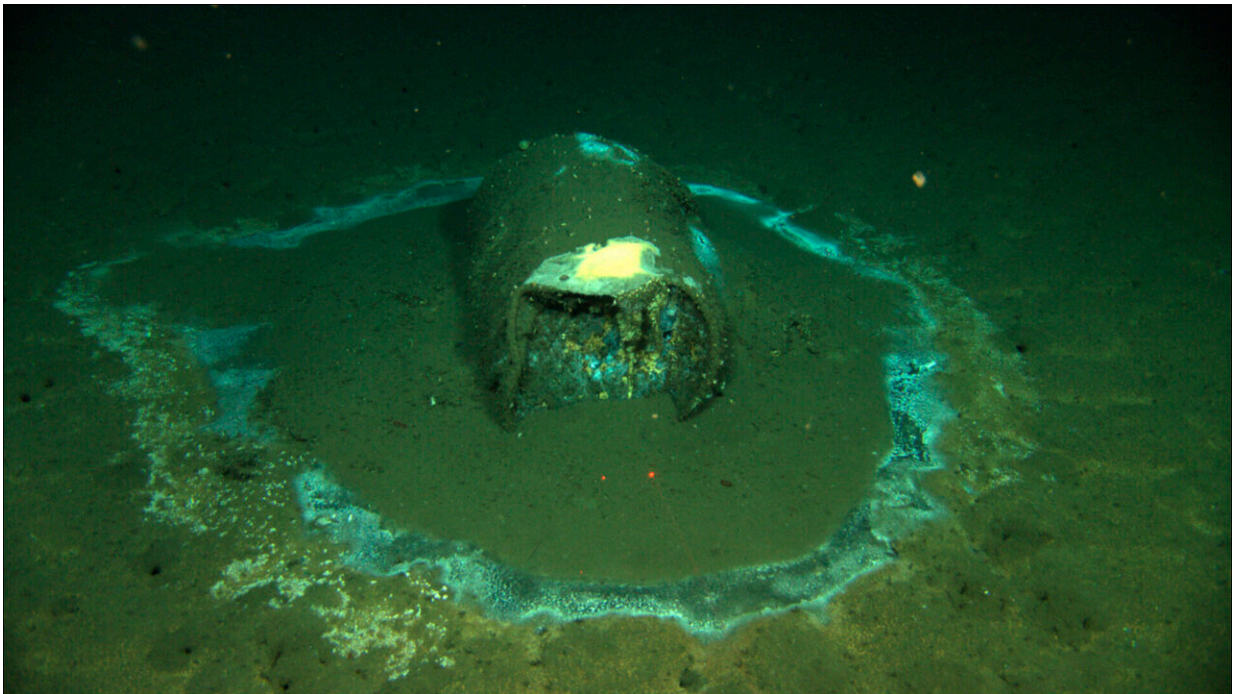


# Scientist: Extent of DDT dumping in Pacific is 'staggering'

April 27 2021, by Julie Watson

---



In this 2011 image provided by the University of California Santa Barbara, a barrel sits on the seafloor near the coast of Catalina Island, Calif. Marine scientists say they have found what they believe to be as many as 25,000 barrels that possibly contain DDT dumped off the Southern California coast near Catalina Island. (David Valentine/UC Santa Barbara / RV Jason via AP)

Marine scientists say they have found what they believe to be more than 25,000 barrels that possibly contain DDT dumped off the Southern

California coast near Catalina Island, where a massive underwater toxic waste site dating back to World War II has long been suspected.

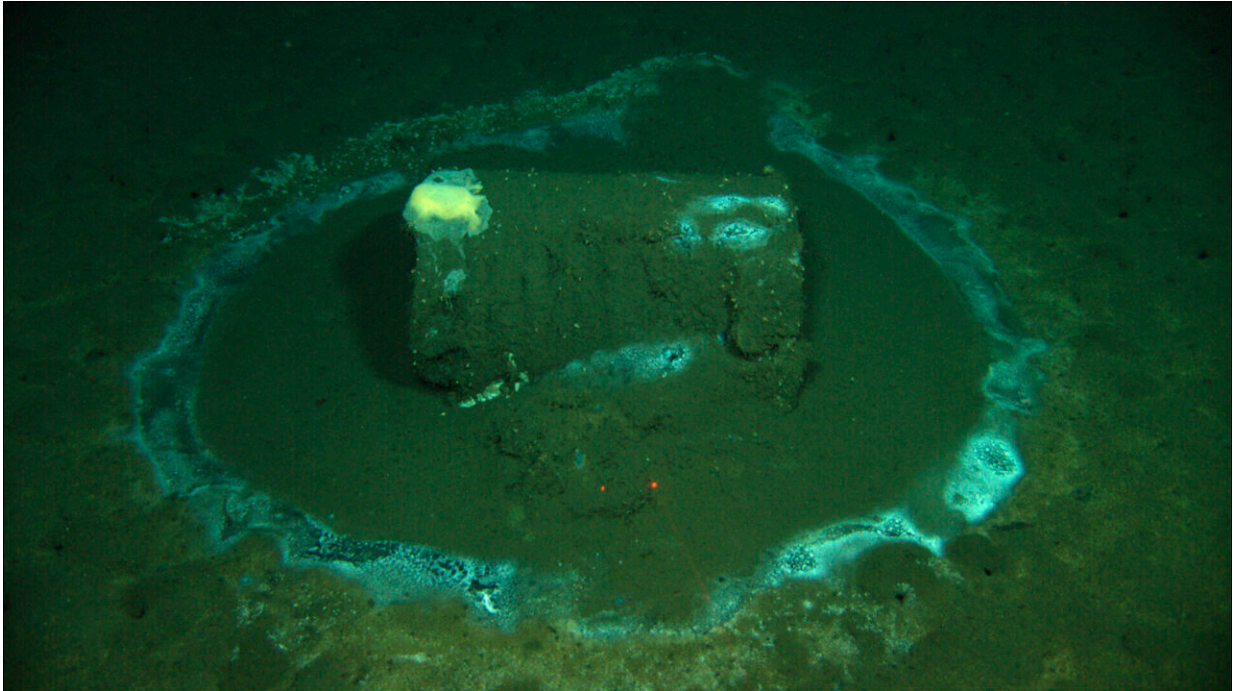
The 27,345 "barrel-like" objects were captured in high-resolution images as part of a study by researchers at the University of California San Diego's Scripps Institution of Oceanography. They mapped more than 56 square miles (145 square kilometers) of seafloor between Santa Catalina Island and the Los Angeles coast in a region previously found to contain high levels of the toxic chemical in sediments and in the ecosystem.

Historical shipping logs show that industrial companies in Southern California used the basin as a dumping ground until 1972, when the Marine Protection, Research and Sanctuaries Act, also known as the Ocean Dumping Act, was enacted.

Disposing of industrial, military, nuclear and other hazardous waste was a pervasive global practice in the 20th century, according to researchers.

Resting deep in the ocean, the exact location and extent of the dumping was not known until now.

The territory covered was "staggering," said Eric Terrill, chief scientist of the expedition and director of the Marine Physical Laboratory at Scripps Institution of Oceanography.



In this 2011 image provided by the University of California Santa Barbara, a barrel sits on the seafloor near the coast of Catalina Island, Calif. Marine scientists say they have found what they believe to be as many as 25,000 barrels that possibly contain DDT dumped off the Southern California coast near Catalina Island. (David Valentine/UC Santa Barbara / RV Jason, via AP)

Underwater drones using sonar technology captured the images of barrels resting 3,000 feet (900 meters) below the surface all along the steep seafloor that was surveyed.

"It really was a surprise to everybody who's worked with the data and who sailed at sea," Terrill told reporters Monday.

The survey provides "a wide-area map" of where the barrels are resting, though it will be up to others to confirm through sediment sampling that the containers hold DDT, Terrill said. It's estimated between 350 and



700 tons of DDT were dumped in the area, 12 miles (20 kilometers) from Los Angeles, and 8 miles (12 kilometers) from Catalina Island.

The long-term impact on marine life and humans is still unknown, said Scripps chemical oceanographer and professor of geosciences Lihini Aluwihare, who in 2015 co-authored a study that found high amounts of DDT and other man-made chemicals in the blubber of bottlenose dolphins that died of natural causes.

"These results also raise questions about the continued exposure and potential impacts on marine mammal health, especially in light of how DDT has been shown to have multi-generational impacts in humans," said Aluwihare, who was not part of the survey expedition.



In this March 2021 image provided by Scripps Institution of Oceanography at UC San Diego, researchers aboard the research vessel Sally Ride deploy an autonomous underwater vehicle (AUV) near Santa Catalina Island, Calif. Marine scientists say they have found what they believe to be as many as 25,000 barrels that possibly contain DDT dumped off the Southern California coast near Catalina Island. (Scripps Institution of Oceanography at UC San Diego via AP)

Diana Aga, a chemistry professor at University at Buffalo who is not affiliated with the study, said the findings were shocking if the barrels are proven to contain the toxic chemical. "That's a lot of DDT at the bottom of the ocean," she said.

If the barrels haven't leaked, they could be moved to a place where disposal is safer, Aga said. If they leaked, scientists could take samples from the water, sediment and other marine life to gauge the damage.

Terrill briefed lawmakers on the findings. California Democratic Sen. Dianne Feinstein is pushing for companies to be held accountable and said the findings could represent only a fraction of the number of barrels underwater.

"Simply put, this is one of the biggest environmental threats on the West Coast," she said. "It's also one of the most challenging because these barrels are 3,000 feet below the ocean's surface and there aren't many records of who did the dumping, where exactly it occurred or how many barrels were dumped."

Scientists conducted the survey from March 10-24 following a [Los Angeles Times report](#) last year about evidence that DDT was dumped

into the ocean.



In this March 2021 image provided by Scripps Institution of Oceanography at UC San Diego, researchers aboard the research vessel Sally Ride recover an autonomous underwater vehicle (AUV) after a search for discarded barrels near Santa Catalina Island, Calif. Marine scientists say they have found what they believe to be as many as 25,000 barrels that possibly contain DDT dumped off the Southern California coast near Catalina Island. (Scripps Institution of Oceanography at UC San Diego via AP)





In this March 2021 image provided by Scripps Institution of Oceanography at UC San Diego, the research Vessel Sally Ride is seen off the coast of Santa Catalina Island, Calif. Marine scientists say they have found what they believe to be as many as 25,000 barrels that possibly contain DDT dumped off the Southern California coast near Catalina Island. (Scripps Institution of Oceanography at UC San Diego via AP)

"Unfortunately, the basin offshore Los Angeles had been a dumping ground for industrial waste for several decades, beginning in the 1930s. We found an extensive debris field in the wide area survey," Terrill said.

Scientists started the search where University of California Santa Barbara professor David Valentine had discovered concentrated accumulations of DDT in the sediments and spotted 60 barrels about a decade ago.

High levels of DDT have been detected in the area's marine mammals, and the chemical has been linked to cancer in sea lions.

The Los Angeles Times reviewed shipping logs from a disposal company supporting Montrose Chemical Corp. of California, a DDT-producing company. The logs showed 2,000 barrels of DDT-laced sludge were dumped in the deep ocean each month from 1947 to 1961 off Catalina, and other companies also dumped there until 1972.

Scripps researchers say they hope their survey will support clean-up efforts.

The expedition on the Sally Ride research vessel included a team of 31 scientists, engineers, and crew conducting 24-hour operations and two autonomous underwater vehicles.

© 2021 The Associated Press. All rights reserved. This material may not be published, broadcast, rewritten or redistributed without permission.

Citation: Scientist: Extent of DDT dumping in Pacific is 'staggering' (2021, April 27) retrieved 27 April 2024 from <https://phys.org/news/2021-04-scientists-barrels-ddt-dump-site.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.