

OUR REGION

TUESDAY
April 29, 2008



THE SAN DIEGO
UNION-TRIBUNE

RANCHO BERNARDO

Cheating scandal

Six high school students are suspected of hacking into a computer system to change grades and access tests. **B3**



SAN DIEGO

Blackwater contract

Shooting range owner drops his deal with Blackwater Worldwide, saying he doesn't want the notoriety. **B3**

SAN DIEGO COURTS

Hells Angels booted from court

Pair who were reporting for jury duty refused to take off their vests and were escorted out by deputies; court officials later apologize. **B4**

FILL 'ER UP

Gas prices for the county by fuel grade. **B2**

DEATHS

Obituaries for residents of the county. **B4-B5**



Solana Beach lifeguard Lou Mathe returned to Fletcher Cove yesterday to surf the break for the first time since Friday's fatal shark attack. Authorities lifted a safety advisory from Torrey Pines to south Carlsbad yesterday. *K.C. Alfred / Union-Tribune*

Autopsy verifies killer was great white shark

Expert says predator was up to 16 feet long

By Terry Rodgers
STAFF WRITER

Tooth fragments found in the body of a swimmer who died Friday off Solana Beach confirm that he was attacked by a great white shark.

"We did recover two minute fragments . . . representative of lower teeth from a white shark," said Ralph Collier, a shark-attack expert from the Los Angeles area.

The fragments were found during the autopsy of David Martin, 66, a retired veterinari-

an from Solana Beach who was bitten while swimming with fellow members of the Triathlon Club of San Diego.

The county Medical Examiner's Office conducted the autopsy. Collier, who participated in the procedure, said the serrated-tooth fragments indicate the shark was 15 to 16 feet long.

"I don't know if we will ever be able to answer the question of why" the shark bit Martin's legs and caused him to bleed to death, said Collier, founder of the Shark Research Committee.

Friday's grisly attack prompted lifeguards to post signs



Great whites have been implicated in 87 percent of the unprovoked shark attacks along the West Coast from 1900 to 1999. *John McCosker / California Academy of Sciences*

▶ **SHARK**
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31 attacks off California since 2000; 2 fatal

along an 8-mile section of coastline — from Torrey Pines to south Carlsbad — warning beachgoers to stay out of the water for 72 hours. The advisory was lifted at 7 a.m. yesterday.

Solana Beach lifeguard Jason Shook started his shift yesterday by hitting the waves at Fletcher Cove, not far from where Martin was attacked.

"We went out surfing to face our fears," Shook said. "It was therapeutic for me."

As the close-knit town of Solana Beach struggles to make sense of the tragedy, marine scientists said relatively little is

known about the great white shark and its life cycle.

Collier's research shows that, historically, shark sightings and attacks are most prevalent during August, September and October.

White sharks are apex predators, meaning they are at the top of the food chain and feed on marine mammals. They have keen eyesight and can detect colors as well as humans can, he said. That's partly why Collier disputes the "mistaken identity" theory often cited after many white-shark attacks.

"Humans don't swim like a seal or look like a seal," he said. "But that doesn't mean white sharks won't attack us using their predatory motivation."

According to the publication "Shark Attacks of the Twentieth Century," 108 unprovoked shark attacks have been recorded along the West Coast

from 1900 to 1999. Great whites were implicated in 87 percent of those attacks.

Since 2000, there have been 31 shark attacks off California, two of which resulted in deaths.

"The one thing I have learned in dealing with shark attacks is that there are as many theories about any incident as there are people," said George Burgess, director of the International Shark Attack File at the Florida Museum of Natural History.

"White sharks are a natural part of the marine environment in the waters off San Diego," Burgess said. "Humans are not owed 100 percent safety when we go into the ocean. The ocean is a wilderness. It's not a chlorinated swimming pool."

Collier believes great whites, which have been protected by federal and state laws for more than a decade, are perhaps be-

coming more numerous along the California coast.

"There is evidence . . . but we would need to do a massive satellite tagging program to confirm that," he said.

Other researchers said no one has enough data to conclude whether great whites are more or less numerous.

"More shark sightings doesn't necessarily equate with higher populations of white sharks," said David Kacev, a graduate student at San Diego State University and UC Davis who studies sharks. "There's a lot more people out in the water than there used to be."

Kacev said the research team he's worked with for the past three years has captured numerous sharks off the state's coast with longline fishing gear, but not one has been a white shark.

Researchers agree on this

MEMORIAL FUND

- To donate to the David Martin Memorial Fund, send contributions to 1st Pacific Bank of California, 937 Lomas Santa Fe Drive, Solana Beach, CA 92075.
- For more information, call (858) 509-2700.

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point: There are many juvenile white sharks off of Southern California.

"It's not uncommon to see large adult white sharks close to shore at this time of year because pregnant females give birth in March and April along the coast from Point Conception down into Baja California," Collier said.

But most of the "resident" white sharks along the West Coast migrate in winter and spring to the deeper ocean hundreds of miles offshore, said Michael Domeier, president of

the Marine Conservation Science Institute in Fallbrook. He has charted the migration patterns of white sharks off Guadalupe Island since 2000 by using satellite tracking devices.

Domeier and his colleagues have found that in late summer and early fall, the loose-knit families of white sharks move to Guadalupe Island — 150 miles off Baja California — or to the central California coast between Año Nuevo and Bodega Head.

As for the Friday attack, Domeier gave little credence to speculation that a white shark bit Martin to protect her newborn pup.

The mother sharks are "just as likely to eat their babies as anything else," he said. "They just drop them (out) and leave."

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