

Tests Show Whales Drink Ocean Water

Some whales and dolphins sip sea water continuously as they swim in the ocean, while others intermittently gulp large quantities to provide desalinized water for body metabolism.

These are basic conclusions reached in a unique 24-hour experiment conducted at Marineland of the Pacific in which radio-isotopic sea water, drunk by the sea mammals, was collected and a nuclear count made of the various waste fluids.

It is the first time such

measurements have ever been made involving sea mammals.

IN THE program, sponsored by the Animal Health Foundation of California, three sea animals — an 850-pound female pilot whale, a 170-pound male striped dolphin, and a 450-pound female Pacific bottlenose — were used. While results on the two dolphins are still being analyzed, the pilot whale research showed that the pilot whale does sip sea water almost constantly.

John Prescott, curator at Marineland, and Dr. Lanny H. Cornell, the oceanarium's veterinarian consultant, worked with Dr. Nancy Telfer, assistant chief of staff at the USC-County Medical Center's department of nuclear medicine. Harry Maiden, executive director of the AHF, provided the funds for the research.

"We wanted to find whether or not these animals drink any sea water," according to Marine curator Prescott, "and if so, how much. It is a basic-research problem and one that is a cornerstone for other experimental activity, once the basic answer is proved."

Dr. Cornell explained the basic test — and the pilot whale results.

DR. TELFER emphasized that the isotopes reside in an extremely short-lived sodium, with a constantly decreasing strength, so that within 24 hours there is practically no concentration left. "At the end of two days," she said, "the residue amount was so small, it couldn't be measured."

"The resultant curve shows without doubt that pilot whales sip sea water," Dr. Cornell said. The data also revealed that body functions of the whale slowed down at night because his urine output decreased and became more concentrated; however, the isotopic count stayed high.

Eye swabs showed a constantly increasing count, the Marineland consultant said. The eyes of whales and dolphins are covered with a film of mucous-like substance that resembles tears to protect the animal's eyeballs against the abrasiveness of the sea.

"Apparently," said Prescott, "this is one way these animals have of excreting excess salt."

West High Grads Win Top Kudos

Dr. Robert Ford, principal of West High School, has received word of the following honors awarded to former West High students:

- James Ellis, salutatorian of the class of 1964 and student body president during his senior year at Occidental College, has been awarded the four-year Herbert Lehman Fellowship for research in the social sciences at Columbia University. His research will be in the area of African Affairs.
- Roberta Packard, valedictorian of the class of 1966, is on the Dean's List at UC Riverside.
- Larry Waldruff, class of 1967, has won an appointment to the U.S. Air Force Reserve Officers' Training Corps at Duke University in his sophomore year, an honor usually reserved for students with junior standing.

SIXTY-FOUR micro-curies of Sodium 24 were placed in a pool for 24 hours with the three animals. The total represents only a small portion of the radioactivity human beings are exposed to in a chest X-ray. However, George Harwood, county radiation range safety officer, monitored radiation levels throughout the entire project.

Isotopic counts were made, according to Dr. Cornell, of the blood serum, urine waste and eye overflow. The waste fluid count began at zero, according to Dr. Cornell, and after an hour it was 12 counts per minute per milliliter of fluid. In six hours the count went to 55; in 10 hours to 112; in 16 hours to 280; and finally to 320 in 24 hours.

"These numbers show that the whale drank small amounts of sea water and excreted the sodium in the waste fluid, using the remaining desalinized water in his body for body metabolism," Dr. Cornell said.

BLOOD SERUM results also showed that pilot whales sip sea water, Dr. Cornell said, adding that blow-hole swabs showed no significant results. Whales and dolphins are warm-blooded, air-breathing mammals that breathe through openings on the top of the head called blow-holes.

The counts were made by Dr. Telfer at the USC-County Medical Center in an enclosed counting chamber where no background radiation exists.

Range safety officer Harwood has submitted figures that indicate none of the human participants in the research received a significant dose of radiation. "This was due to our continuous fresh-water washes and precautionary procedures," Prescott said.

The animals were weighed, measured and fitted with special balloon catheters. Each time the animals were taken out of the isotopic water they were cleaned in fresh-water and then returned to the tank.

Prescott and Dr. Cornell delivered a paper on their findings at the fifth annual Stanford Research Institute Conference on Biological Sonar and Diving Mammals.

Farm Labor Office Sets New Service

Employers in this area now will be able to reach the California Department of Employment Farm Labor Service 24 hours each day.

A new telephone answering service has been put into service by the department, enabling employers to place calls at any time of the day or night, seven days a week.

Regular office hours are 7 a.m. to noon Monday through Friday. Applicants unable to contact the office during the regular hours also may use the new telephone service, according to Ben Garcia, farm labor officer.

IN THE program, sponsored by the Animal Health Foundation of California, three sea animals — an 850-pound female pilot whale, a 170-pound male striped dolphin, and a 450-pound female Pacific bottlenose — were used. While results on the two dolphins are still being analyzed, the pilot whale research showed that the pilot whale does sip sea water almost constantly.



ISOTOPIC DOLPHIN . . . A 450-pound dolphin is examined by researchers before being placed in a tank at Marineland of the Pacific in a unique project to determine if sea mammals drink sea water. Results showed that they do. Pictured (from left) are trainer Jack Pearson; Dr. Lanny Cornell, veterinarian; Dr. Nancy Telfer, assistant chief of staff at the USC-County Medical Center's department of nuclear medicine; and trainer Eddie Asper.

Air Force Training Plan Set

A co-operative work-study program has been established by El Camino College with the U.S. Air Force for college men interested in working part or full-time while gaining college education.

Approved by the El Camino College Board of Trustees, this program will begin as soon as students are contacted by the Air Force through their counselor at El Camino.

To qualify for the program, male students should be at least 18 years of age, presently enrolled as a full-time student at El Camino, and have at least a B average from last semester's work. Freshmen students must have maintained a B average in high school.

Interested students must be majoring in engineering, physical science, law, mathematics, accounting or technology in order to be accepted into the program. Further information regarding the program is available in the counseling office at the college.

NOW OPEN!
SILVER SKATES
BARBER SHOP
23824 S. WESTERN AVENUE
(1/2 Block So. Ice Rink)

Volunteer Leaders Slate March of Dimes Meeting

Approximately 100 volunteer leaders for the March of Dimes in the West Los Angeles County area will meet for a pre-campaign briefing session Wednesday, Nov. 13, at Lobster House, 665 No. Harbor Drive, Redondo Beach.

Representatives from Torrance will join the leaders from Beverly Hills, Brentwood, Culver City, Baldwin Hills, El Segundo, Hollywood, Inglewood, Lawndale, Lomita, Harbor City, Lennox, Malibu, Mar Vista, Manhattan Beach, Pacific Palisades, Palos Verdes, Rancho Park, Cheviot Hills, Redondo Beach, Santa Monica, Venice, Westchester, West Los Angeles, and Westwood.

Present and former Los Angeles County poster children and their parents will be among the guests.

Emphasis will be stressed on the current educational program of the March of Dimes that of informing the public of the recent breakthroughs in the battle against birth defects.

Have the NIGHTTIME of Your Life! NIGHT RACING now! at beautiful LOS ALAMITOS

FIRST OF NINE RACES MON.-SAT. AT 7 P.M.

Saturday \$40,000 Juvenile
Monday \$80,000 Championship
(Last Night of Meeting)

LOS ALAMITOS
WEST OF DISNEYLAND ON KATELLA

Looking for a store that'll put you in six "New Shape" outfits and still give you old shape prices?

Look around Foreman & Clark.

- Shape your wardrobe from:
- any \$75.00 Suit
- any \$49.95 Sport Coat
- any \$25.00 pair of Slacks
- any \$25.00 second pair of Slacks

A \$174.95 WARDROBE FOR ONLY \$139.00
SAVE \$35.95!

You're in Great Shape now. Get six "New Shape" outfits plus save \$35.95 to spend on your favorite female shape.

Suits are all wool worsted solids, diagonals, twills, window panes and checks with high vents. Classic Elegant Sport Coats have high vents too. Year 'round slacks are medium weight worsted and slim.

Charge it — take 10 months to pay

F&C FOREMAN & CLARK

142 Fashion Stores from Coast to Coast
DEL AMO SHOPPING CENTER—21965 HAWTHORNE BOULEVARD • 371-1294—OPEN MONDAY THRU FRIDAY 10 TO 9:30
• SATURDAY 10 TO 4 • ALSO LAKEWOOD CENTER • LOS ALTOS CENTER



TORRANCE CAMERA
— Your Headquarters for Photo Needs — Rentals — Repairs
• DOWNTOWN TORRANCE • 1330 SARTORI AVE. 328-3154



Leave it to Spencer's Leave it at Spencer's Save 25% Cash & Carry.

We get all kinds of traffic at the Spencer's plant, from baby carriages to Cadillacs, and we welcome every bit of it! Bring us your rugs any way you want and earn a big 25% Cash and Carry discount on the finest professional rug cleaning. With the Cash and Carry discount, an ordinary 9x12 ft. rug is beautifully cleaned for just about \$10. Come any weekday 8:30-5, Saturday 8:30-5. Rugs also picked up and delivered at standard low rates.

SPENCER'S CARPET CARE
CARPET CARE & SALES
TORRANCE
20625 HAWTHORNE BLVD.
(2 bks. North of Torrance Blvd.)
371-4671

SAN PEDRO
609 N. PACIFIC AVE.
(by Pacific Ave. overpass)