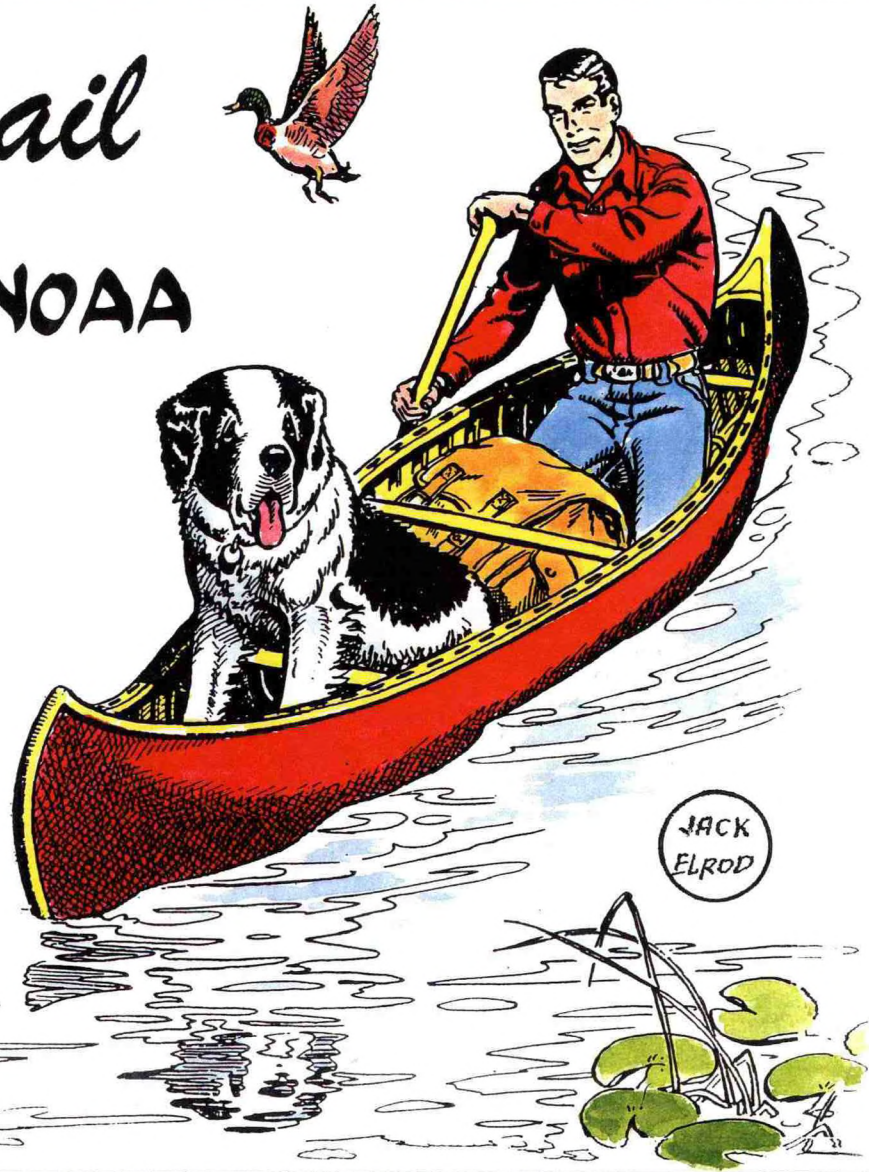


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Mark Trail

WORKS WITH NOAA



LIBRARY

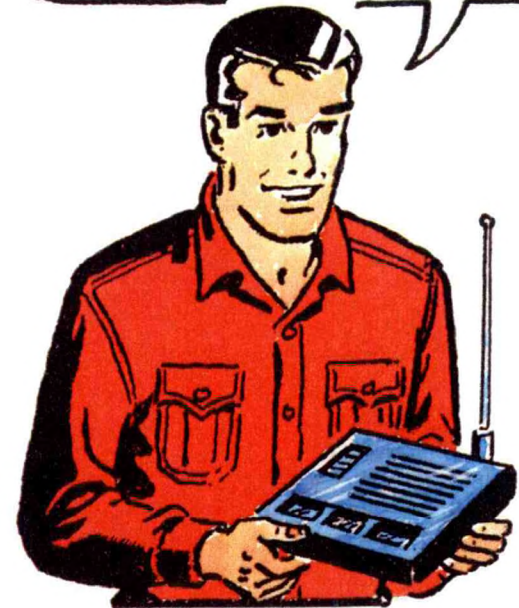
OCT 02 2006

National Oceanic &
Atmospheric Administration
U.S. Dept. of Commerce

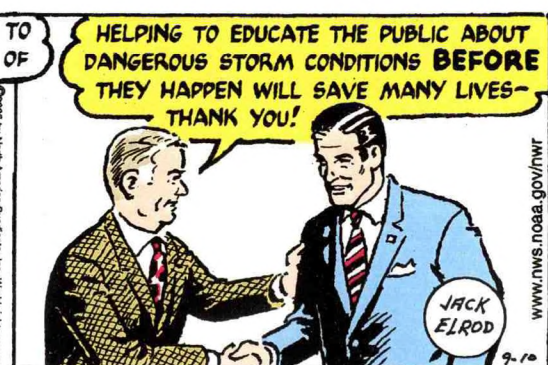
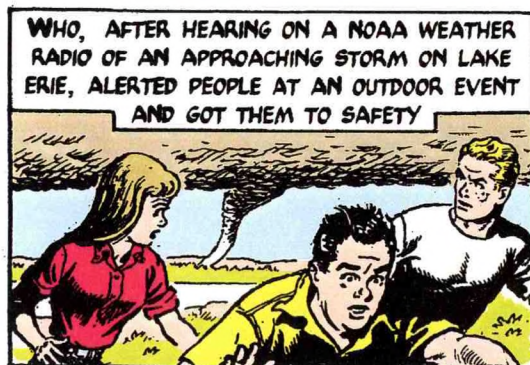
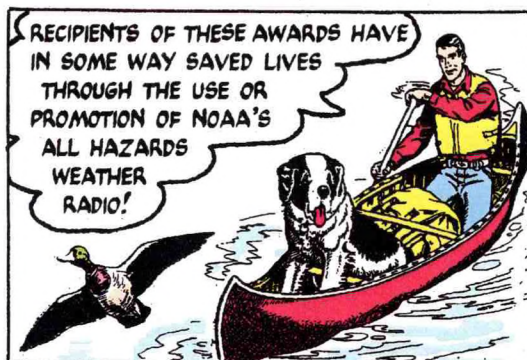
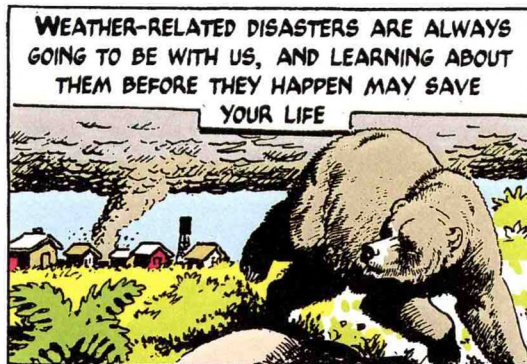
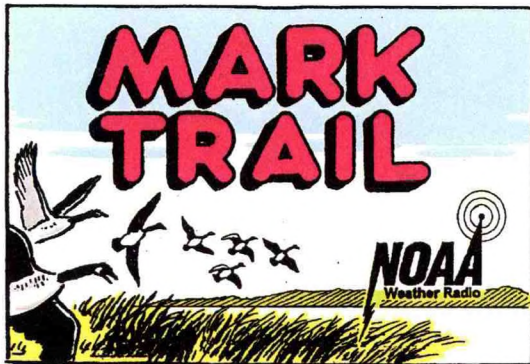
MARK TRAIL IS SYNDICATED BY KING FEATURES, IS PUBLISHED IN APPROXIMATELY 175 NEWSPAPERS NATIONWIDE AND REACHES NEARLY 23 MILLION READERS WORLDWIDE. THE COMICS IN THIS BOOK REPRESENT A FEW HIGHLIGHTS OF THE MANY NOAA-RELATED FEATURES PRODUCED WITHIN THE PAST 10 YEARS:

1. MARK TRAIL AWARDS (2006)
2. FLASH FLOODS/NOAA WEATHER RADIO (1995)
3. NATIONAL MARINE SANCTUARIES (1995)
4. HURRICANES/NOAA WEATHER RADIO (2001)
5. WEATHER SATELLITES 40TH ANNIVERSARY (2000)
6. SCIENCE ON A SPHERE (2003)
7. OCEAN EXPLORATION/TELEPRESENCE (2005)
8. LA NIÑA - PACIFIC MARINE ENVIRONMENTAL RESEARCH LABORATORY (1998)
9. HUMPBACK WHALE NATIONAL MARINE SANCTUARY (1999)
10. NOAA WEATHER RADIO (1995)

GET THE INFORMATION
YOU NEED...24 HOURS A
DAY...GET A NOAA
WEATHER RADIO!

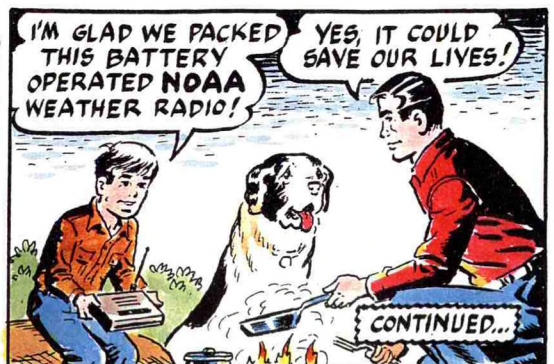
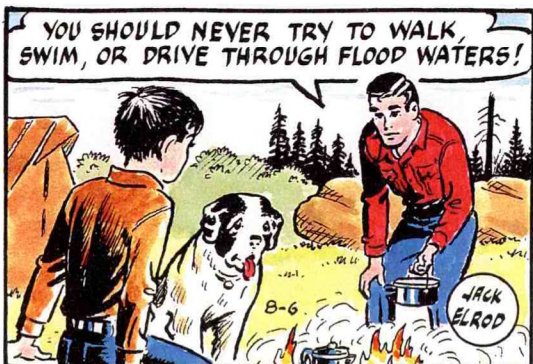
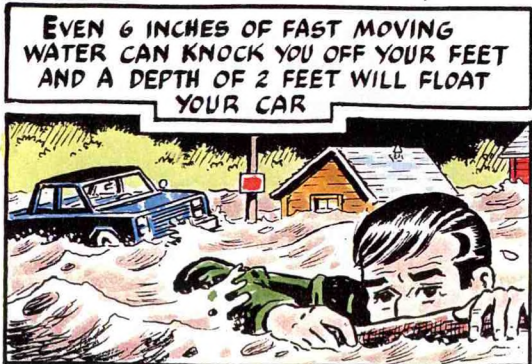
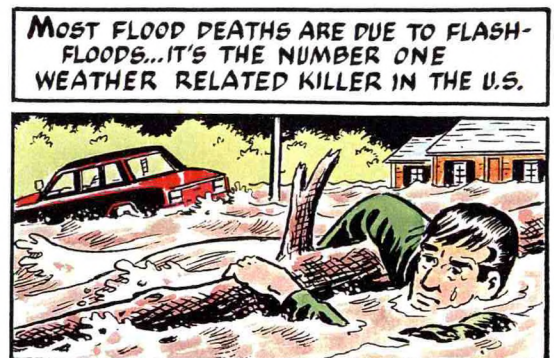
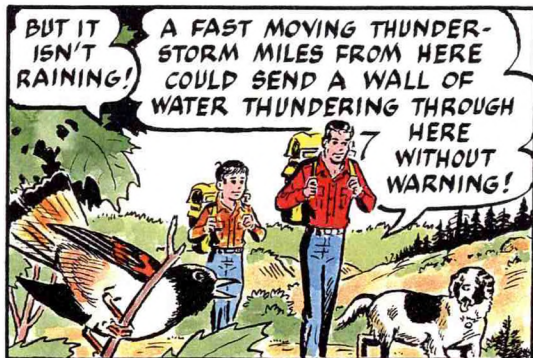
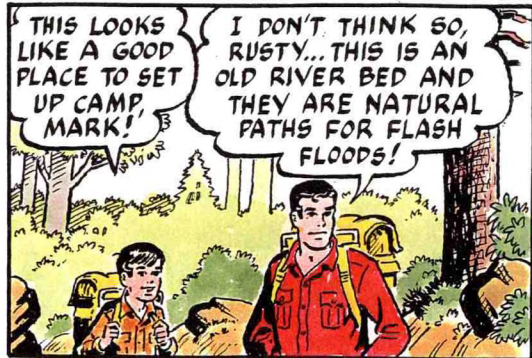
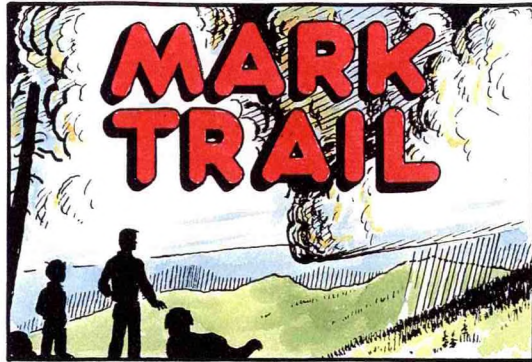


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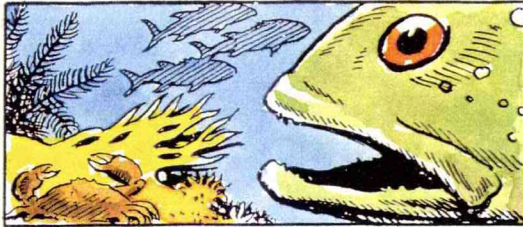
www.nws.noaa.gov/nwr



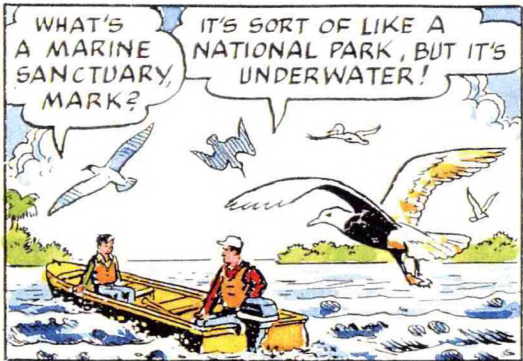
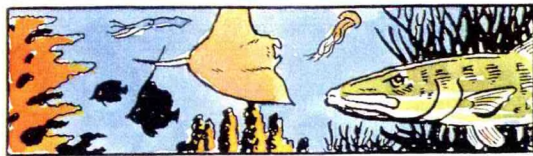
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MARK TRAIL

IN SUPPORT OF PUBLIC CONCERN ABOUT THE EFFECTS OF POLLUTION, CONGRESS IN 1972 ESTABLISHED THE MARINE SANCTUARY PROGRAM WITHIN NOAA



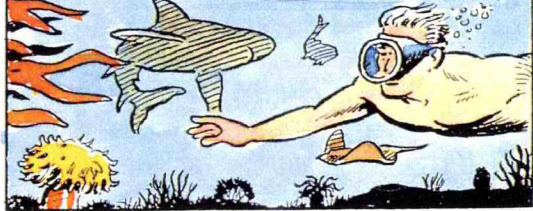
THEODORE ROOSEVELT'S VISION OF A SYSTEM OF NATIONAL PARKS IS SAID TO BE "THE BEST IDEA AMERICA EVER HAD"... ONE HUNDRED YEARS LATER A VISION OF NATIONAL MARINE SANCTUARIES COULD BECOME THE BEST IDEA IN THIS CENTURY



THERE ARE 12 OF THEM, RUSTY, AND THEY ARE RICH IN BIOLOGICAL AND CULTURAL RESOURCES THAT NEED TO BE PROTECTED



SANCTUARIES ARE MANY THINGS TO MANY PEOPLE...SIGHTSEERS, DIVERS, FISHERMEN, STUDENTS, SCIENTISTS, ETC., CAN BENEFIT BY THESE NEAR-SHORE LABORATORIES



KELP FORESTS, CORAL REEFS, SUBMERGED SHIPWRECKS, UNDERWATER CANYONS AND A VARIETY OF MARINE LIFE, INCLUDING WHALES, INHABIT THESE NUTRIENT-RICH WATERS



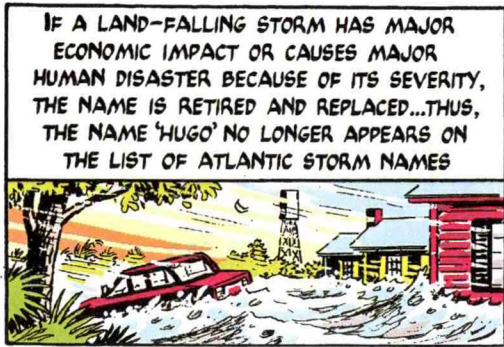
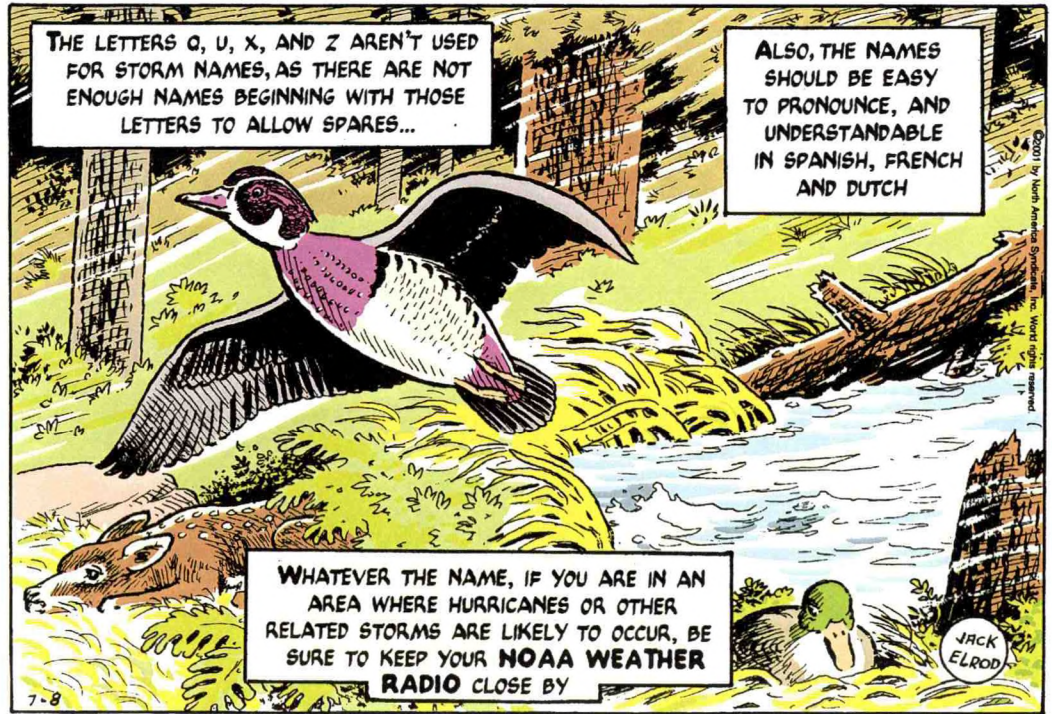
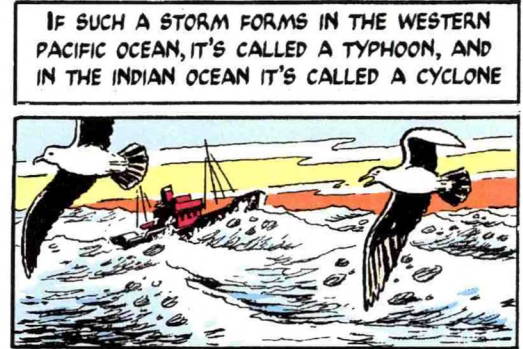
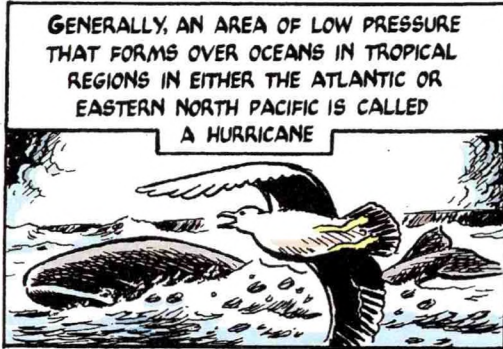
SANCTUARIES ARE HAVENS FOR MANY CREATURES LIKE SEA OTTERS, SEABIRDS, SEALS AND THOUSANDS OF OTHERS, MANY OF WHICH ARE THREATENED OR ENDANGERED



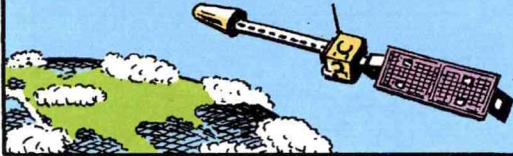
PROTECTING THESE PRISTINE AREAS IS LIKE AN INSURANCE POLICY TAKEN OUT BY THE NATION TO PROTECT THE FUTURE OF OUR OCEANS!



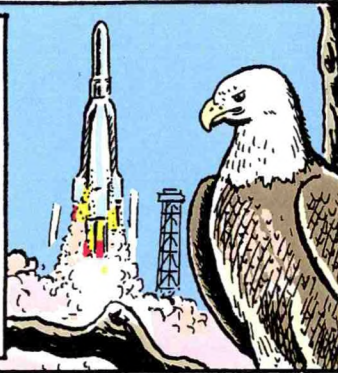
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MARK TRAIL



IT MAY NOT BE WELL-KNOWN THAT THE U.S. HAS HAD AN OPERATIONAL WEATHER-SATELLITE SYSTEM FOR OVER 40 YEARS



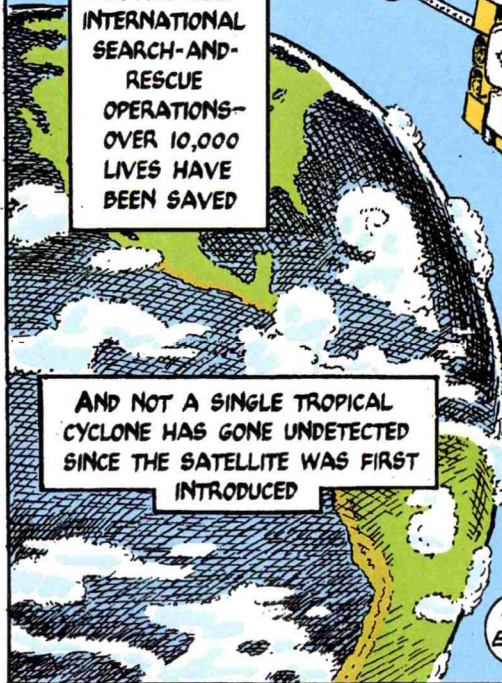
WE OFTEN TAKE FOR GRANTED THE BENEFITS WE RECEIVE FROM SATELLITES, BUT THEY GREATLY ENHANCE THE QUALITY OF HUMAN LIFE AND PROTECTION OF THE EARTH'S ENVIRONMENT!



HOW DO WEATHER FORECASTERS GET THEIR INFORMATION TO PREDICT SEVERE STORMS AND OTHER TYPES OF WEATHER?... WELL, MUCH OF IT COMES FROM SATELLITES!



THE DATA THEY PROVIDE HELP INTERNATIONAL SEARCH-AND-RESCUE OPERATIONS—OVER 10,000 LIVES HAVE BEEN SAVED



THEY HELP MONITOR OZONE LEVELS AND ANIMAL MIGRATION PATTERNS AND WITH FORECASTING AND DETECTING FOREST FIRES...

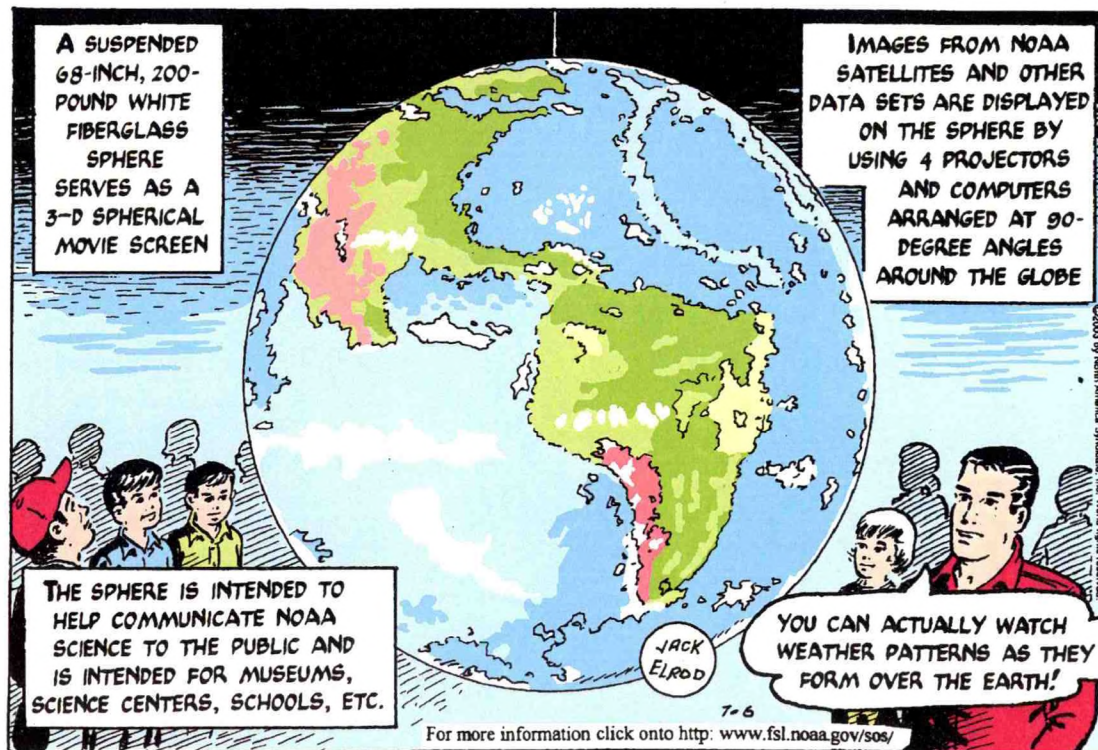
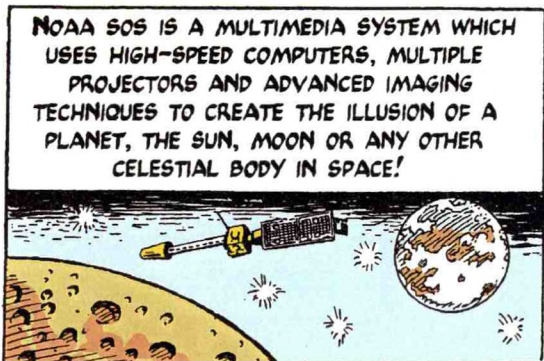
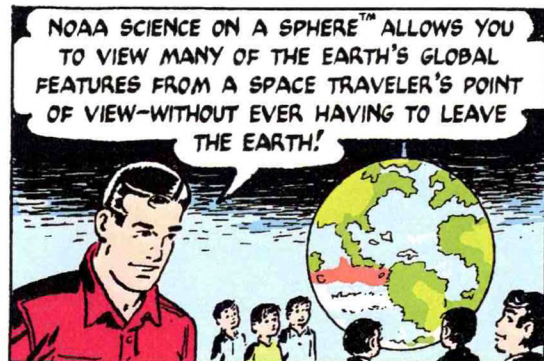
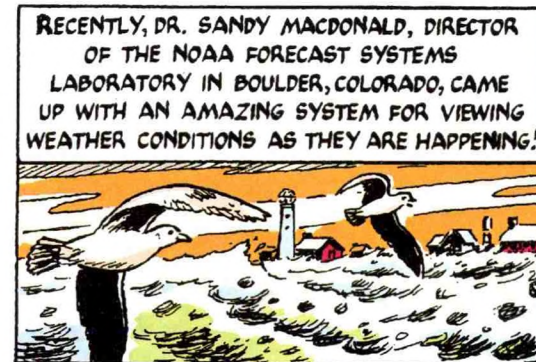
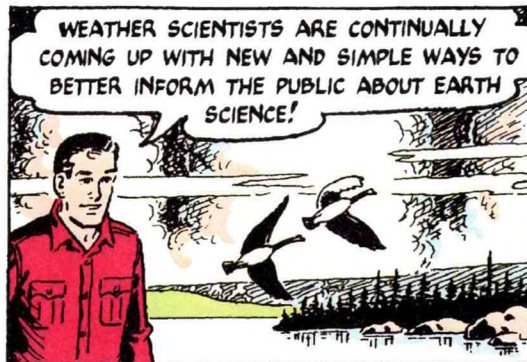
AND NOT A SINGLE TROPICAL CYCLONE HAS GONE UNDETECTED SINCE THE SATELLITE WAS FIRST INTRODUCED

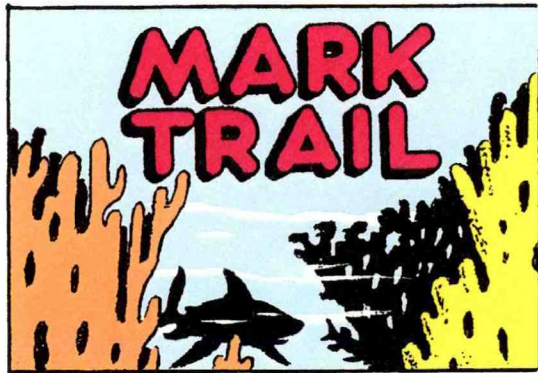
THIS IS THE 40TH ANNIVERSARY OF THE FIRST WEATHER SATELLITE, AND WE ARE GRATEFUL TO THE PEOPLE AT NASA AND NOAA FOR HELPING TO MAKE OUR LIVES SAFER AND BETTER

MORE THAN 51% OF THE PUBLIC UTILIZE 3-5 DAY WEATHER FORECASTS FOR RECREATION AND BUSINESS ACTIVITIES

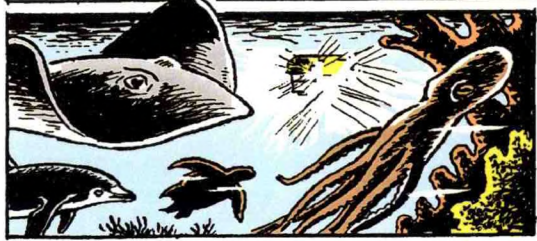


JACK ELROD





REMOTELY OPERATED VEHICLES ON THE SEA FLOOR, CONNECTED IN REAL TIME BY SATELLITE AND HIGH-SPEED INTERNET, ARE ADDING GREATLY TO OCEAN RESEARCH



NEW "TELEPRESENCE" TECHNOLOGY WILL RESULT IN MORE SCIENTISTS ASHORE ADDING THEIR EXPERTISE TO DEEP OCEAN MISSIONS, WITHOUT GOING NEAR SALT WATER



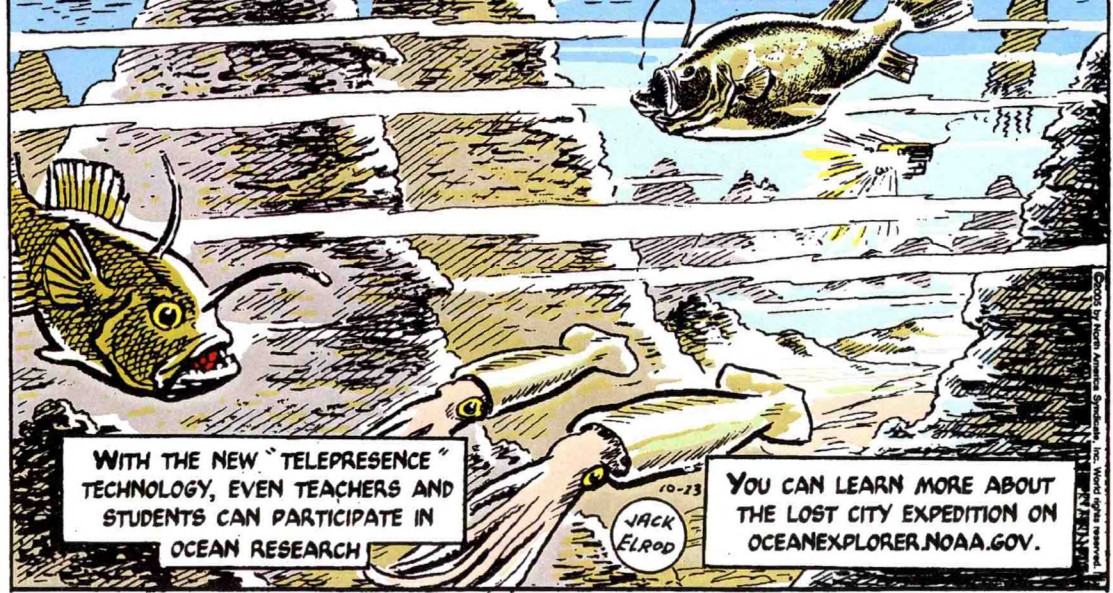
IN THE UNIVERSITY OF WASHINGTON'S COMMAND CENTER WITH "LOST CITY" CHIEF SCIENTIST DR. DEBBIE KELLEY



LOST CITY IS AN INCREDIBLE VENT FIELD, MARK...

THE LOST CITY FIELD IS THE FIRST OF ITS KIND DISCOVERED, IN THAT FLUID FLOW IS NOT DRIVEN BY HEAT FROM COOLING UNDERWATER VOLCANOES...

LOST CITY MAY BE A CLOSE ANALOGUE TO HYDROTHERMAL SYSTEMS THAT OPERATED DURING THE EARLY FORMATION OF EARTH AND ITS OCEANS



IT IS ON THE MID-ATLANTIC RIDGE, WHICH IS PART OF A VAST UNDERWATER MOUNTAIN CHAIN THAT ZIPPERS AROUND THE GLOBE LIKE STITCHES ON A BASEBALL

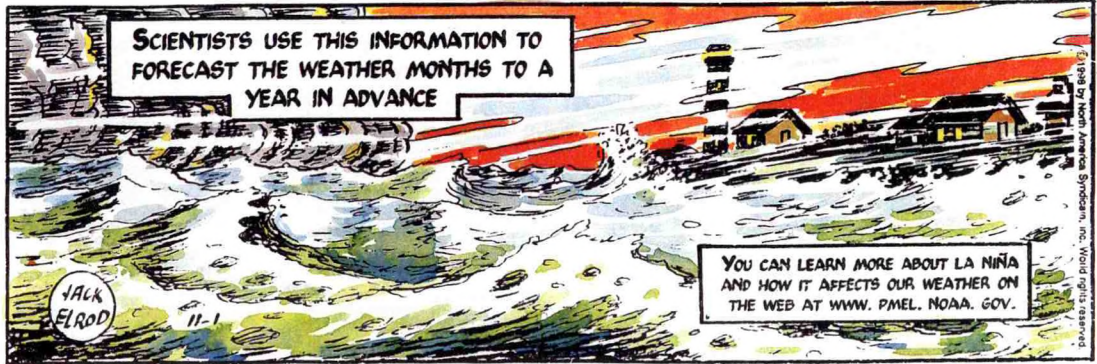
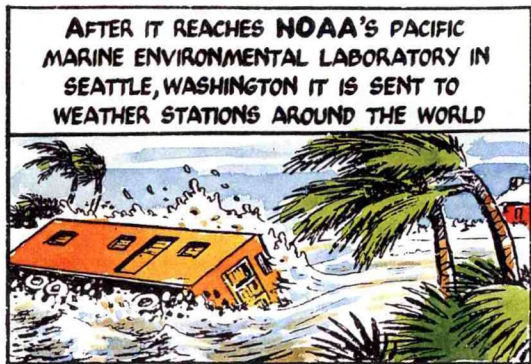
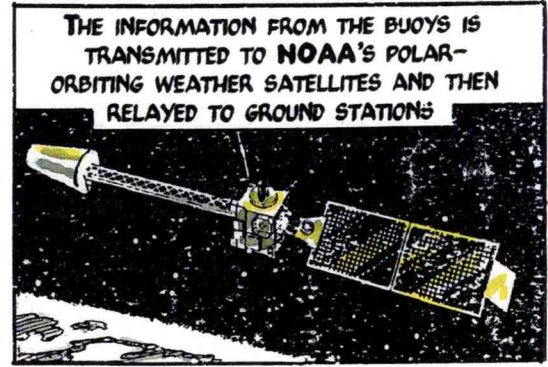
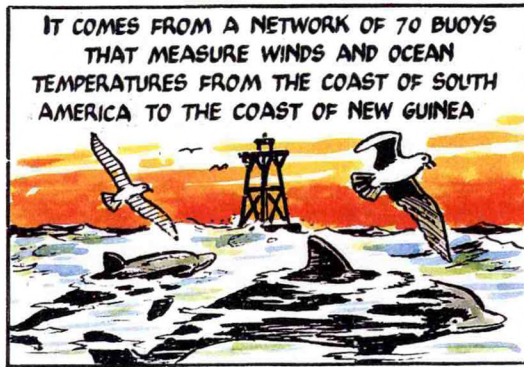
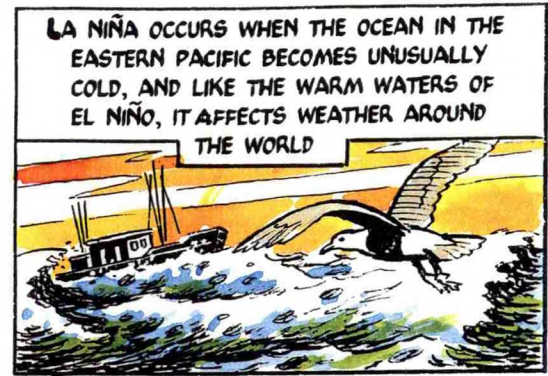
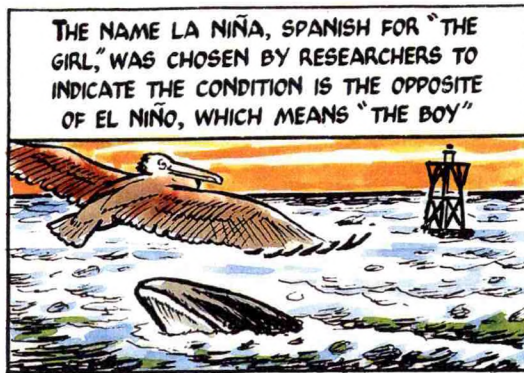
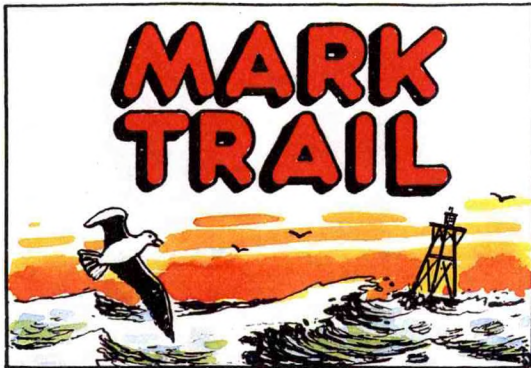


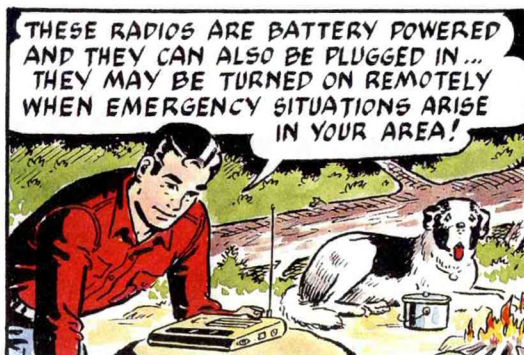
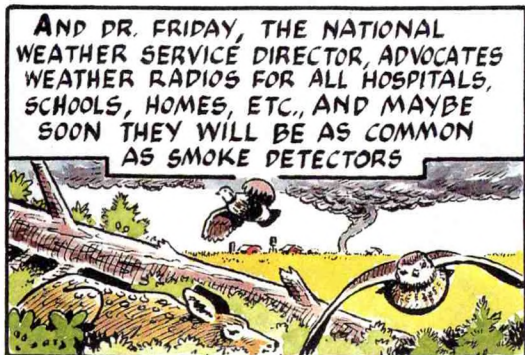
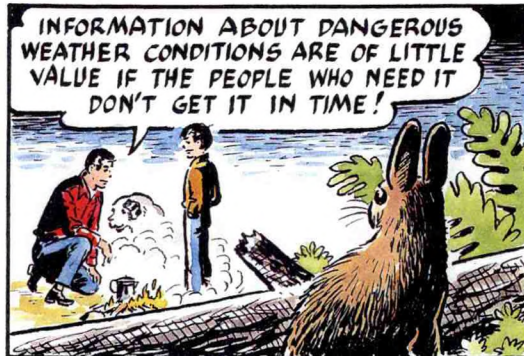
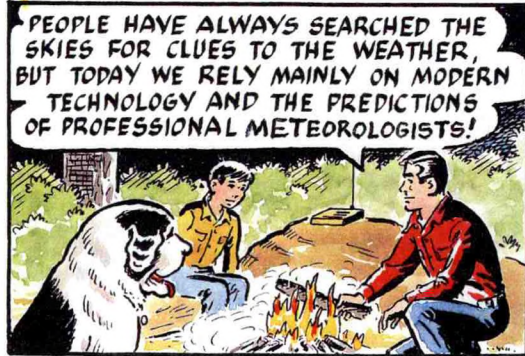
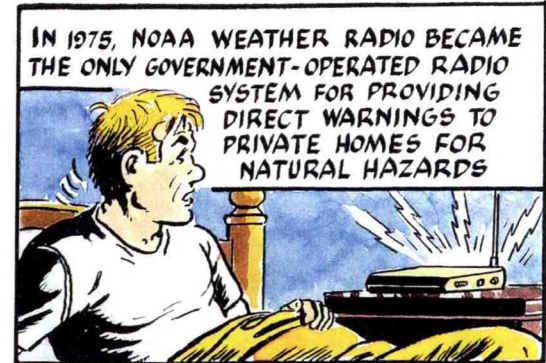
WITH THE NEW "TELEPRESENCE" TECHNOLOGY, EVEN TEACHERS AND STUDENTS CAN PARTICIPATE IN OCEAN RESEARCH

YOU CAN LEARN MORE ABOUT THE LOST CITY EXPEDITION ON OCEANEXPLORER.NOAA.GOV.

JACK ELROD

Illustration by Jack Elrod. © 2005 by Ocean Exploration Society. All rights reserved.



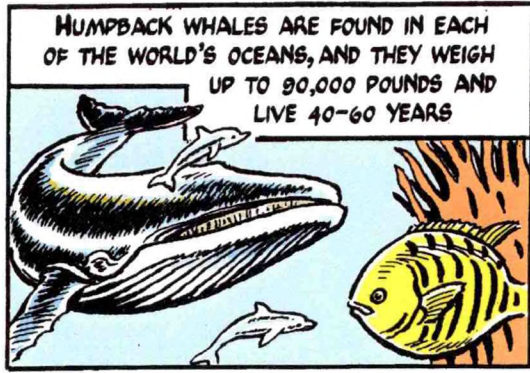


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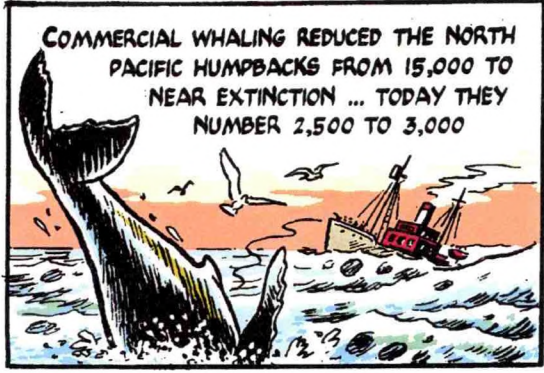
MARK TRAIL



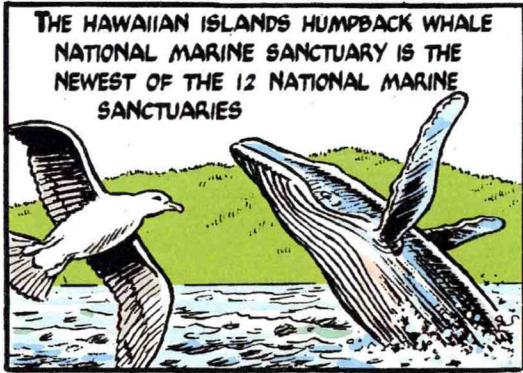
HUMPBACK WHALES ARE FOUND IN EACH OF THE WORLD'S OCEANS, AND THEY WEIGH UP TO 90,000 POUNDS AND LIVE 40-60 YEARS



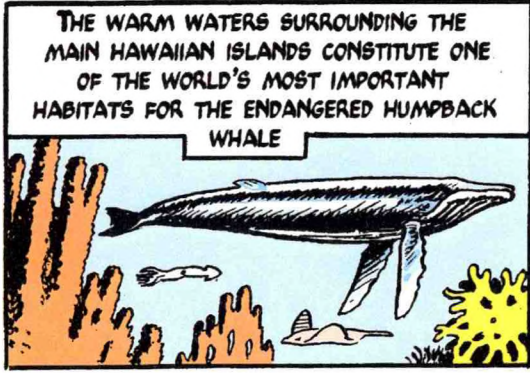
COMMERCIAL WHALING REDUCED THE NORTH PACIFIC HUMPBACKS FROM 15,000 TO NEAR EXTINCTION ... TODAY THEY NUMBER 2,500 TO 3,000



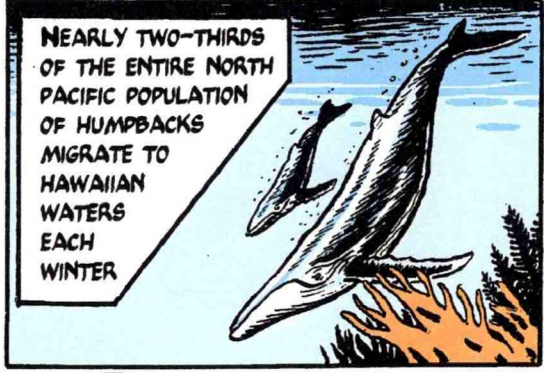
THE HAWAIIAN ISLANDS HUMPBACK WHALE NATIONAL MARINE SANCTUARY IS THE NEWEST OF THE 12 NATIONAL MARINE SANCTUARIES



THE WARM WATERS SURROUNDING THE MAIN HAWAIIAN ISLANDS CONSTITUTE ONE OF THE WORLD'S MOST IMPORTANT HABITATS FOR THE ENDANGERED HUMPBACK WHALE



NEARLY TWO-THIRDS OF THE ENTIRE NORTH PACIFIC POPULATION OF HUMPBACKS MIGRATE TO HAWAIIAN WATERS EACH WINTER

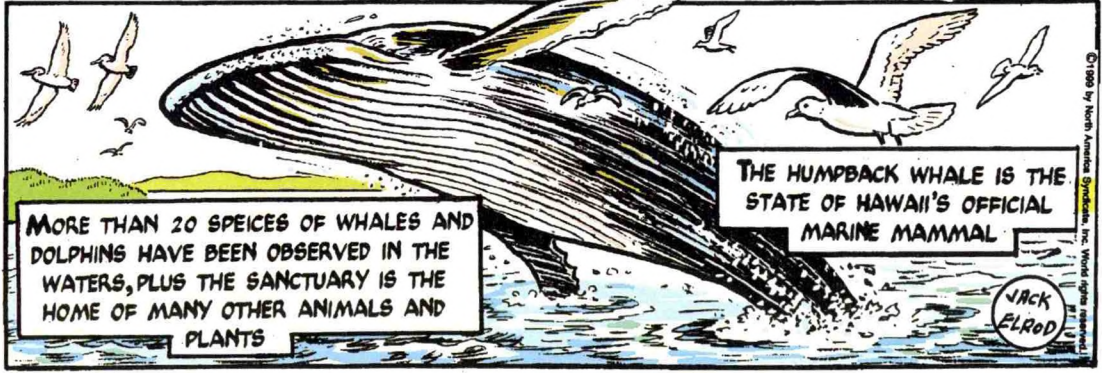


HERE THEY ENGAGE IN BREEDING, CALVING AND NURSING ACTIVITIES CRITICAL TO THEIR SURVIVAL



MORE THAN 20 SPECIES OF WHALES AND DOLPHINS HAVE BEEN OBSERVED IN THE WATERS, PLUS THE SANCTUARY IS THE HOME OF MANY OTHER ANIMALS AND PLANTS

THE HUMPBACK WHALE IS THE STATE OF HAWAII'S OFFICIAL MARINE MAMMAL



JACK ELROD

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MARK TRAIL STRIP CHRONOLOGY



THE LISTING BELOW REPRESENTS MOST OF THE MARK TRAIL SUNDAY FEATURES WHICH HAVE PRESENTED NOAA-RELATED THEMES DURING THE 10-YEAR PARTNERSHIP SINCE 1995:

1995

8/6 FLASH FLOODS/NOAA WEATHER RADIO
8/13 NOAA WEATHER RADIO
12/31 NATIONAL MARINE SANCTUARIES

1996

4/7 CLIMATE CHANGE
5/5 TORNADOES
6/2 THUNDERSTORMS
7/21 LIGHTNING
7/28 HEAT EXHAUSTION
8/11 HURRICANES
9/26 NOAA RESEARCH
10/13 EL NINO
10 3-WEEK STORYLINE ON NOAA WEATHER RADIO
11/1 PACIFIC MARINE ENVIRONMENTAL LAB
11/10 MARINE MAMMALS/ECOTOURISM
12/29 HYPOTHERMIA

1997

1/18 OCEANS
3/9 NATURAL DISASTER PLANS
4/30 WEATHER TRIVIA
6/1 SHARKS
6/29 REEFS
7/27 SQUID
8/24 TURTLES
11/2 CLOUDS
11/9 CLOUDS
12 TSUNAMIS

1998

1/18 INTERNATIONAL YEAR OF THE OCEAN
3/29 TSUNAMIS
6/14 HURRICANES
9/19 THE SEA
9/26 EL NINO/LA NINA
10/4 OCEANS
11/1 LA NINA/EL NINO

1999

2/14 HUMPBACK WHALE NATIONAL MARINE SANCTUARY
3/21 SEVERE WEATHER/NOAA WEATHER RADIO
4/11 RED TIDES
12/5 CORAL REEFS

2000

3/26 TORNADOES/NOAA WEATHER RADIO
7/9 HURRICANE RESEARCH
10/8 NOAA SERVICES
12/3 WEATHER SATELLITES 40TH ANNIVERSARY

2001

7/8 HURRICANES/NOAA WEATHER RADIO

2003

4/27 NOAA WEATHER RADIO
7/6 SCIENCE ON A SPHERE

2004

6/20 SEA TURTLES

2005

4/10 TSUNAMIS/NOAA WEATHER RADIO ALL HAZARDS
4/17 TSUNAMIS
6/5 RIP CURRENTS
7/24 LIGHTNING
10/16 REMOTE UNDERSEA RESEARCH
10/23 OCEAN EXPLORATION-TELEPRESENCE

2006

1/20 UNDER SEA EXPLORATION
3/12 SEVERE WEATHER
7/23 FAMILY DISASTER PLAN
9/10 NOAA WEATHER RADIO ALL HAZARDS
MARK TRAIL AWARDS