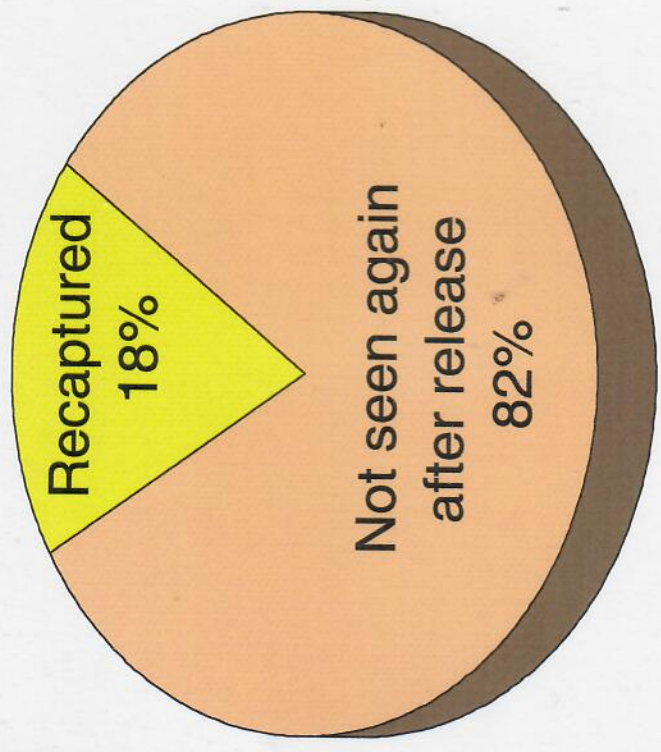
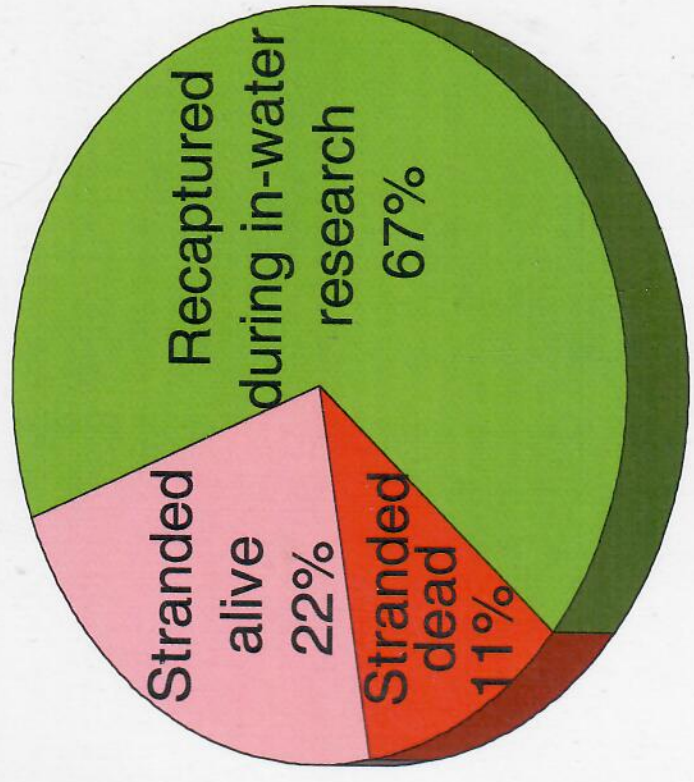


HAWAIIAN GREEN TURTLES A DECADE OF CAPTIVE-REARING FOR EDUCATIONAL DISPLAY



OUTCOME FOR GREEN TURTLES
RELEASED INTO THE WILD AT THE
MAUNA LANI BAY HOTEL
N = 102



CIRCUMSTANCE OF RECAPTURES
N = 18

BACKGROUND

Green turtles obtained from Hawaiian waters by Sea Life Park in the 1960's have nested and produced hatchlings on an artificial beach every year since 1976. Most of these hatchlings are released into the wild shortly after emergence. However, starting in 1989, a few hatchlings have been retained each year for an educational loan program to facilitate the display of small turtles less than about 40 cm in carapace length (SCL) at qualifying aquaria in Hawaii, Canada, and the mainland USA. Steve Kaiser, the program's originator, called this novel outreach the "Hawaiian Sea Turtle Ambassador Program". Steve's rationale, shared by many of us, was that live sea turtles, especially small ones, are their own best advocates for conservation when viewed up close by the public. The end-point of each carefully conducted loan occurs when the turtles reach the carrying capacity of their display tanks and are certified healthy for release into Hawaiian waters. "Head-starting" has not been the purpose of the program, although at times this aspect has been given inappropriate emphasis by the news media and others. The program's fundamental goals - currently being accomplished with distinction - are the enhancement of public awareness and conservation education on behalf of sea turtles.

RESULTS

From 1990-99, 102 captive-reared green turtles ranging from 25.5-68.0 cm SCL (mean - 40.7 cm) were released at the Mauna Lani Bay Hotel. Twelve turtles (11.7%) have been recaptures from 1-5 times by hand, net or (in one instance) a visual tag resighting during in-water research. Elapsed times from initial release to the most recent recapture ranged from 2.3 - 7.3 years. Eight of the 12 turtles were encountered within 5 km of the Mauna Lani Bay Hotel. Three others were recaptured along the coastline 45-80 km to the south at Honokohau (1) and Honaunau (2). And lastly, one turtle was recaptured in the major foraging habitat of Kaneohe Bay on Oahu, a distance of 270 km.

Six other turtles (5.9% of 102) were found stranded 0.8-2.4 years after release. Two were dead and four were alive. Necropsy of the former revealed that one was severely emaciated, and the other in good body condition with no indication of the cause of death. This turtle stranded 2.4 years after release along green turtle foraging habitat on the island of Lanai, 150 km from Mauna Lani. The four live strandings included three emaciated and/or excessively buoyant turtles, and one with a severe propellor injury to the carapace. This turtle also had two small fishing hooks externally and one internally revealed by x-ray. All four live strandings required considerable veterinary treatment and captive rehabilitation by NMFS before being released a second time.

The carapace growth rates of the 11 turtles recaptured and remeasured during in-water research ranged from 0.7 - 3.2 cm/yr (mean - 2.1 cm/yr). The Kaneohe Bay recapture displayed the most rapid increase (3.2 cm/yr). A small fibropapilloma was recorded on the eye of this turtle. Growth rates for the 11 turtles compare favorably and are consistent with data obtained over the past 25 years for naturally occurring green turtles in a wide array of foraging habitats throughout the Hawaiian Islands. However, three of the 11 turtles are known to have been fed pelleted fish food and lettuce during a part of their post-release residency near the Mauna Lani Bay Hotel. The growth rates of the six stranded turtles ranged from only 0.5 - 0.9 cm/yr (mean - 0.6 cm/yr). These data suggest the failure of the turtles to adapt to the wild and thrive.

CONCLUSION

Nine of the 18 captive-reared turtles encountered have successfully adapted to natural Hawaiian marine habitats. The other nine did not adapt (6 stranded and 3 being fed in the wild). Eighty-four turtles have thus far not been seen again. PIT tags used to identify these animals will help ensure recognition if they are recaptured during coming years or decades.

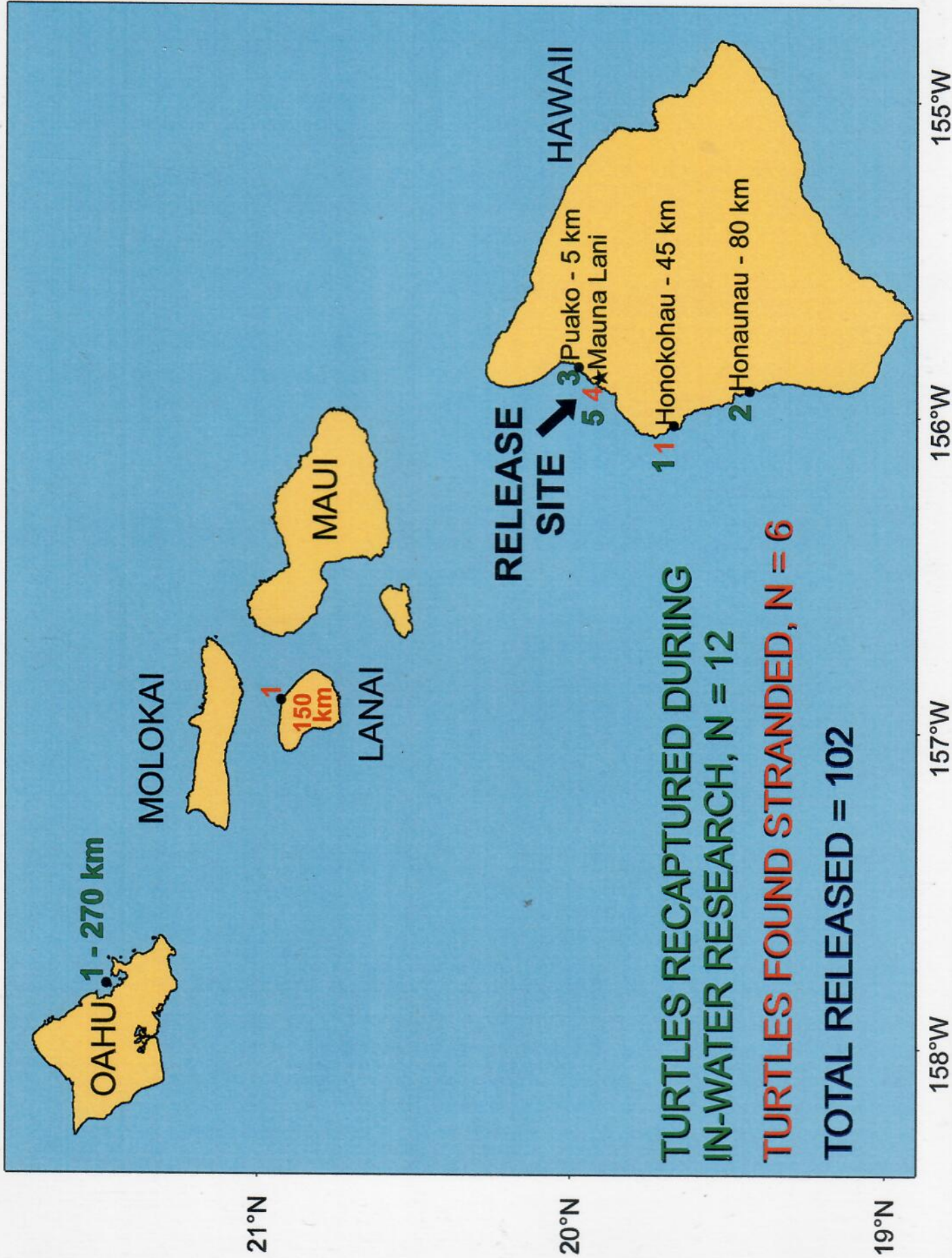


ONE OF THE 10 CAPTIVE-REARED HAWAIIAN HONU RELEASED ON TURTLE INDEPENDENCE DAY 1998. NOTE THAT GREEN TURTLES OF THE HAWAIIAN POPULATION HAVE PROPORTIONALLY LARGER FLIPPERS THAN COUNTERPARTS IN FLORIDA

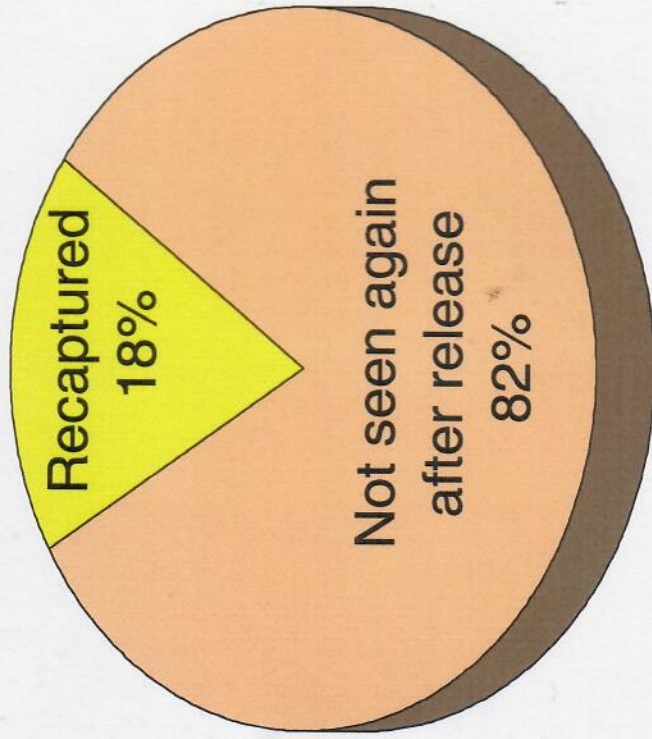
FOURTH OF JULY TURTLE INDEPENDENCE DAY
AT THE MAUNA LANI BAY HOTEL



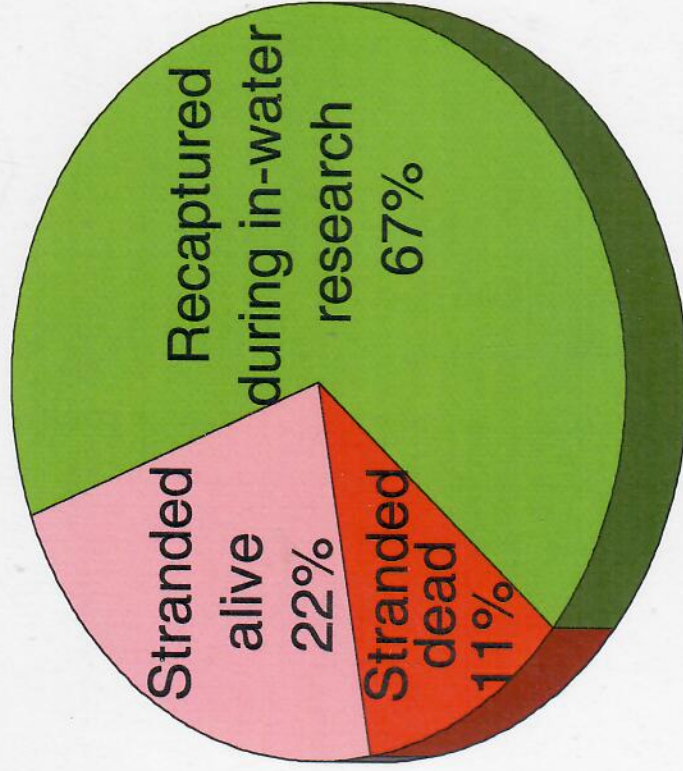
RECAPTURE LOCATIONS AND DISTANCES FROM RELEASE SITE



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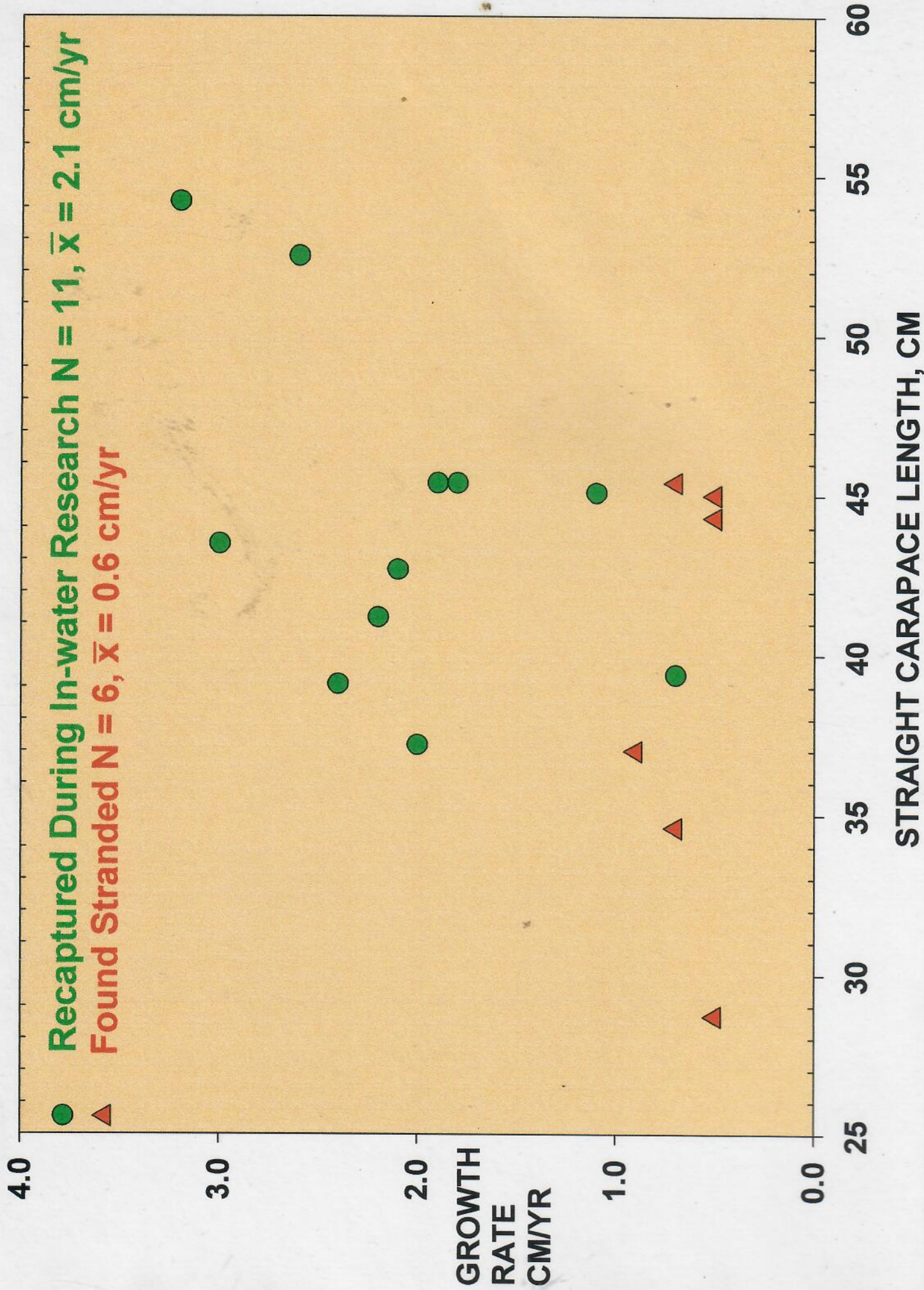


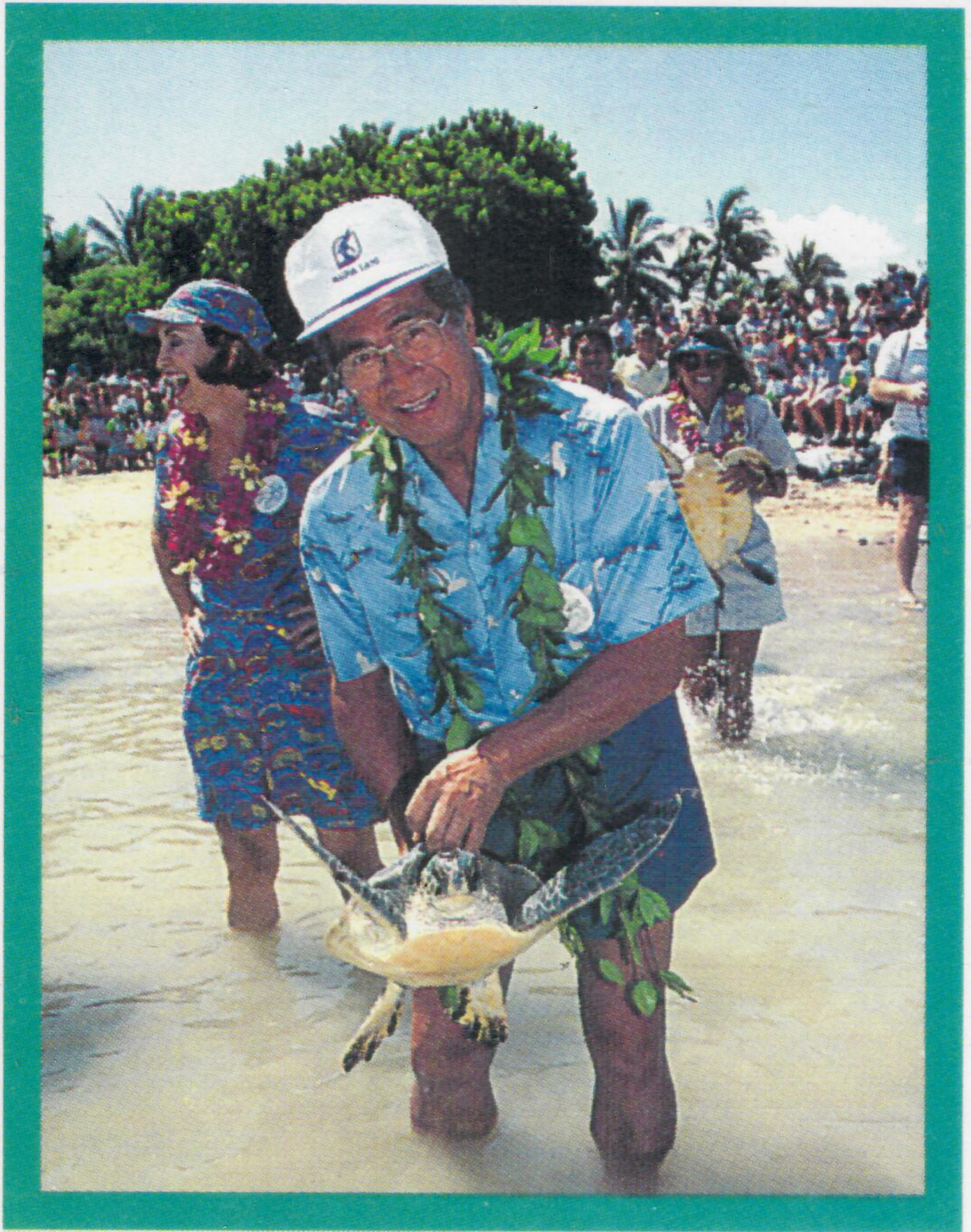
CIRCUMSTANCE OF RECAPTURES
N = 18

RECAPTURE LOCATIONS AND DISTANCES FROM RELEASE SITE



GROWTH RATES IN THE WILD OF RECAPTURED TURTLES





U.S. SENATOR DANIEL AKAKA A FREQUENT "TURTLE INDEPENDENCE DAY" PARTICIPANT AND VIGOROUS SUPPORTER OF HAWAIIAN SEA TURTLE RESEARCH