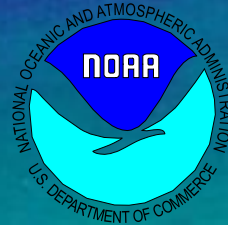


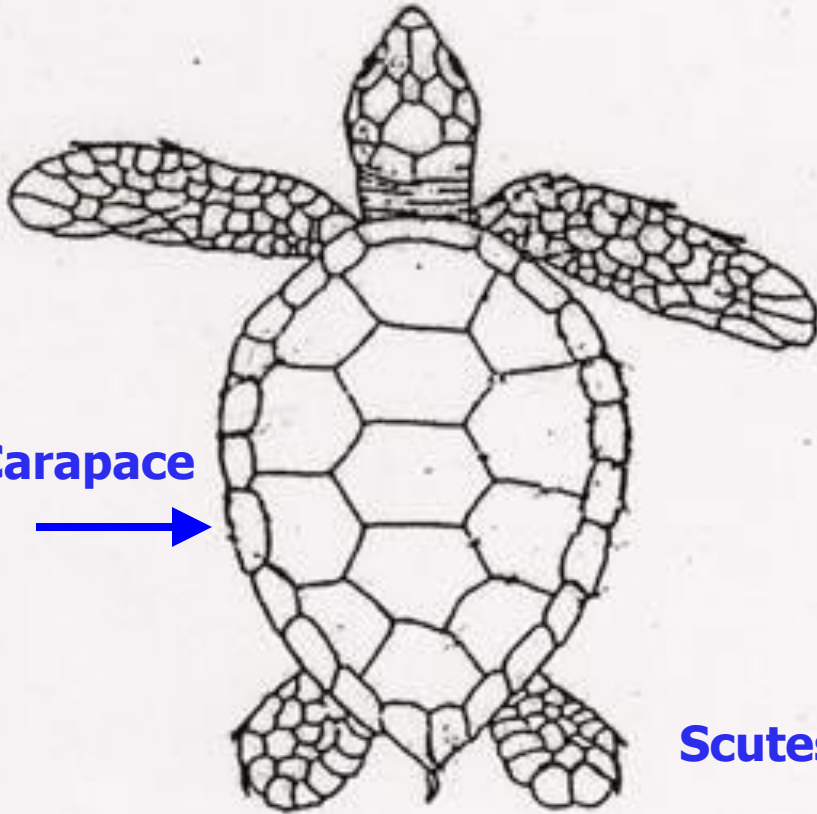
MARINE TURTLE RESEARCH PROGRAM



Shawn K. K. Murakawa



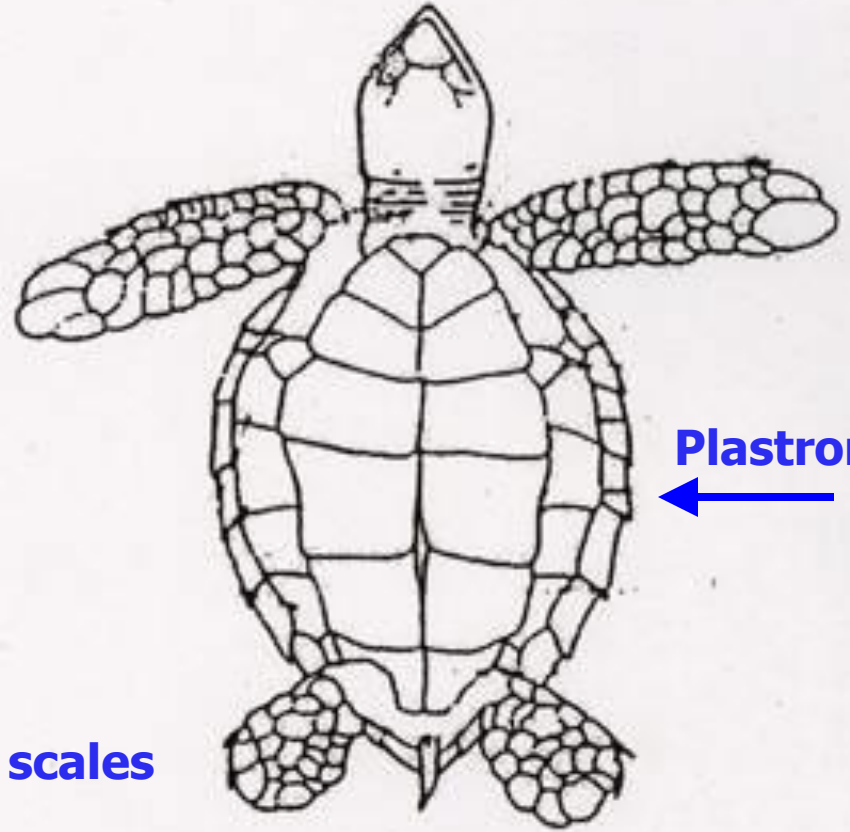
Dorsal



Carapace



Ventral



Plastron

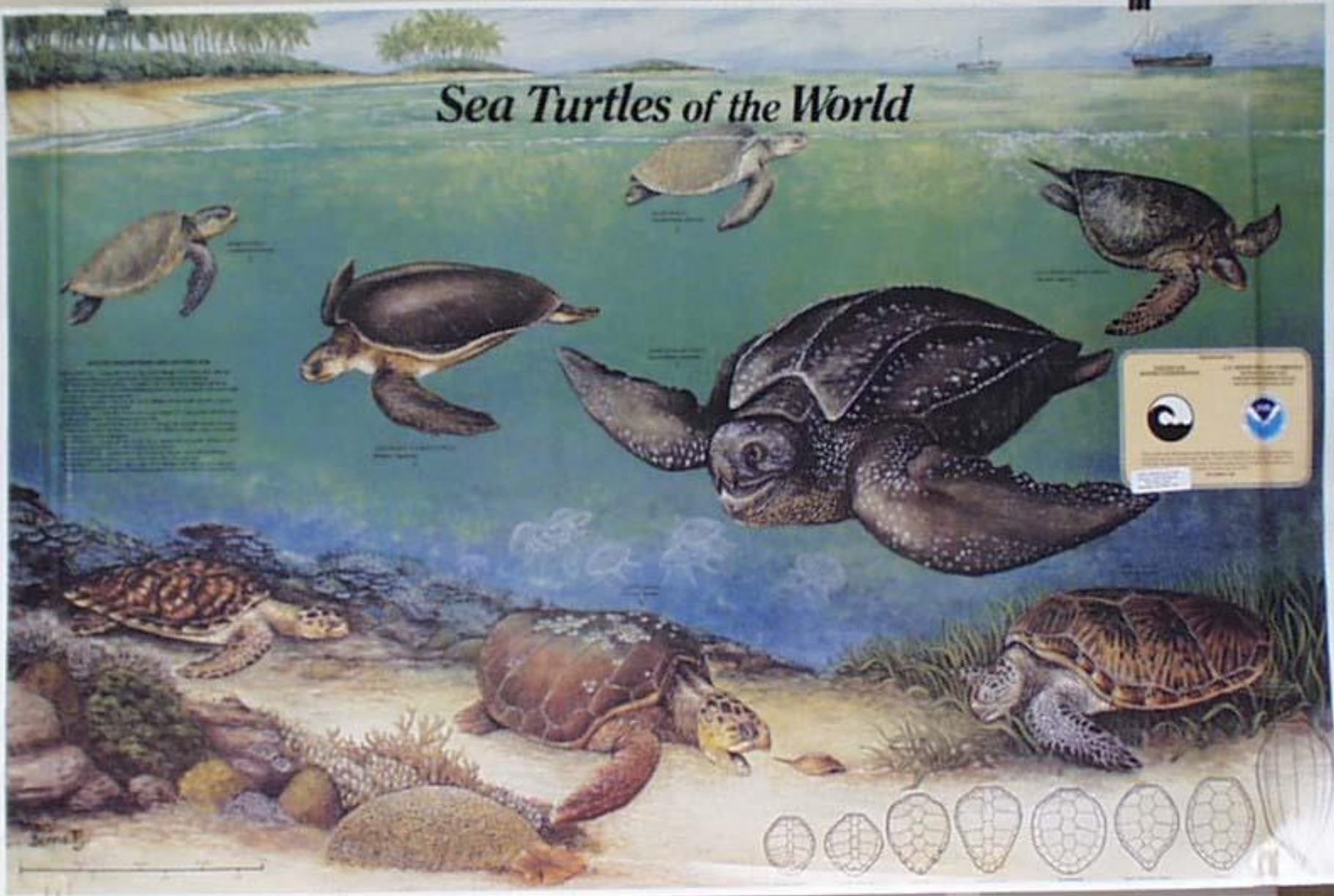


Scutes = scales



George H. Balazs

Sea Turtles of the World



[Faint, illegible text block]

[Faint text associated with the logos]



Seven Species of Sea Turtles

1. Green (*Chelonia mydas*)
2. Hawksbill (*Eretmochelys imbricata*)
3. Leatherback (*Dermochelys coriacea*)
4. Olive ridley (*Lepidochelys olivacea*)
5. Loggerhead (*Caretta caretta*)
6. Australian Flatback (*Chelonia depressa*)
7. Kemps ridley (*Lepidochelys kempi*)

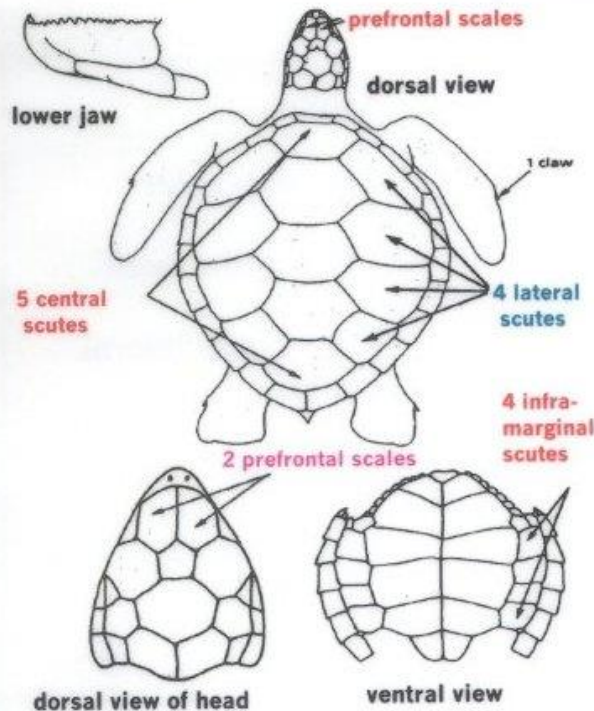
GREEN

- **Named for the color of internal fat**
- **Weights up to 300 lbs**
- **Feeds on algae and seaweed**
- **Pacific nesting beaches in Hawaii, Australia, and various Pacific Islands**



George H. Balazs

Green Sea Turtle



- Smooth oval shell
- Brown/yellow greenish color
- 4 pairs of lateral scutes
- 5 central scutes
- 2 prefrontal scales
- Serrated lower jaw







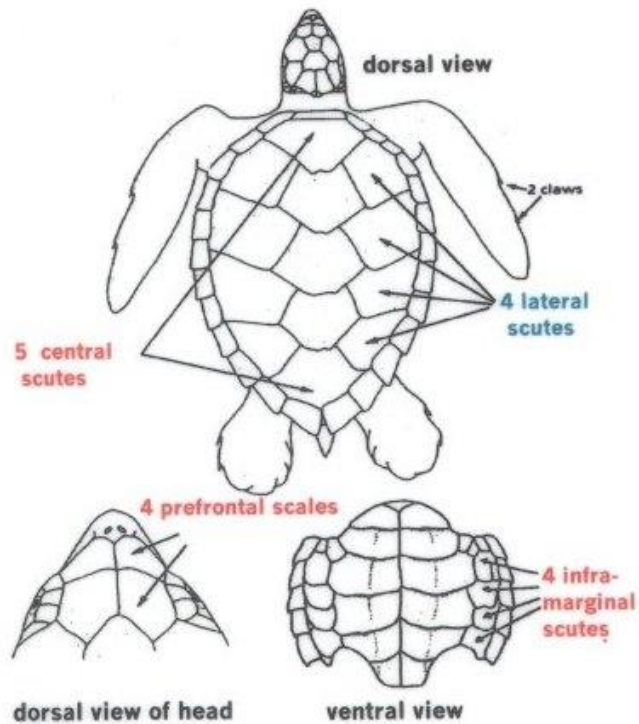
Ursula Keuper-Bennett

HAWKSBILL

- **Dark brown with overlapping scutes**
- **Weights up to 150 lbs**
- **Pointed beak used for picking food such as sponges from coral**
- **Pacific nesting beaches in Australia, Asia, Philippines, and Hawaii**



Hawksbill Sea Turtle



- Overlapping scutes
- Narrow shell
- Hawk-like beak
- 4 pairs of lateral scutes
- 5 central scutes
- 4 prefrontal scales

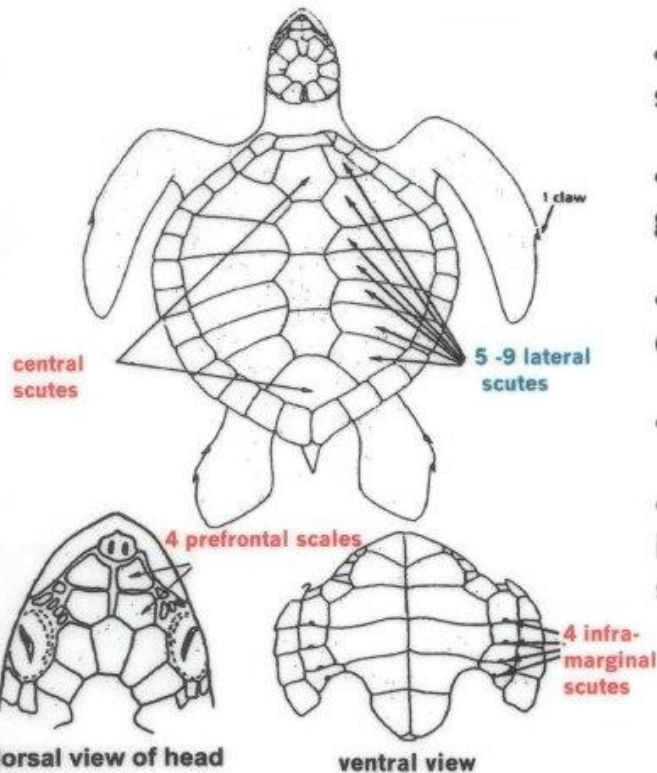


OLIVE RIDLEY

- **Grey in color and weighs up to 110 lbs**
- **Has a relatively high carapace (shell)**
- **Feeds on jellyfish and pelagic red crabs**
- **Pacific nesting beaches in Mexico and Central America**



OLIVE RIDLEY SEA TURTLE



- Almost round-shaped shell
- Olive/grayish green color
- Between 5-9 pairs of lateral scutes
- 4 prefrontal scales
- 4 pairs inframarginal scutes

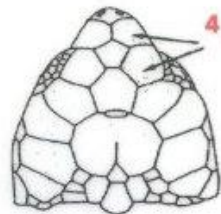
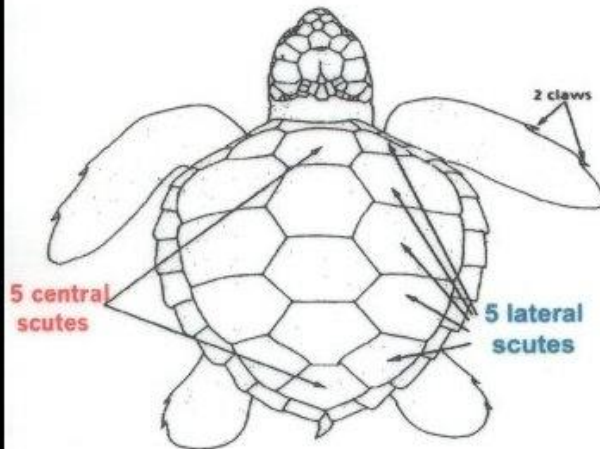


LOGGERHEAD

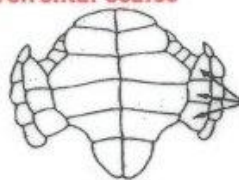
- Reddish in color and weighs up to 300 lbs
- Comparatively large head
- Typically preys on benthic invertebrates such as cnidarians, cephalopods, and fish
- Pacific nesting beaches in Japan and Australia



Loggerhead Sea Turtle



4 prefrontal scales



3 infra-marginal scutes

- Heart shaped shell
- Reddish/orange color
- 5 pairs of lateral scutes
- 5 central scutes
- 4 prefrontal scales
- 3 inframarginal scutes



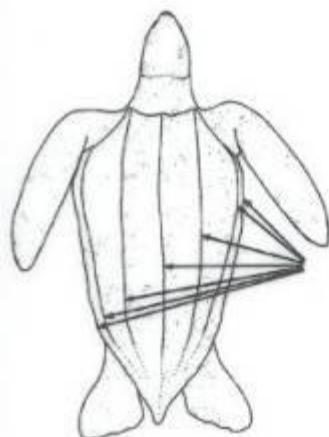
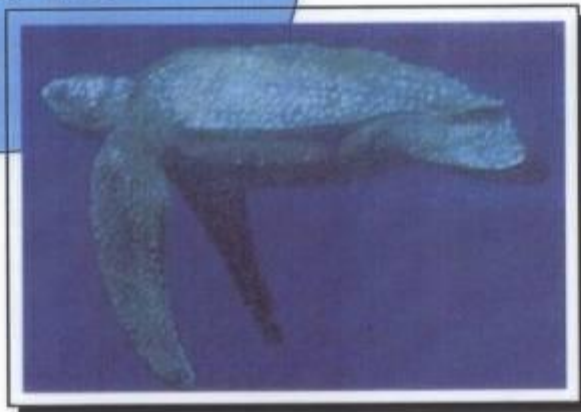


LEATHERBACK

- Largest of all sea turtles
- Weighs up to 2,000 lbs
- Only soft-shelled turtle
- Diet primarily consists of cnidarians, tunicates, and jellyfish
- Pacific nesting beaches in China and Mexico



Leatherback Sea Turtle



dorsal ridges

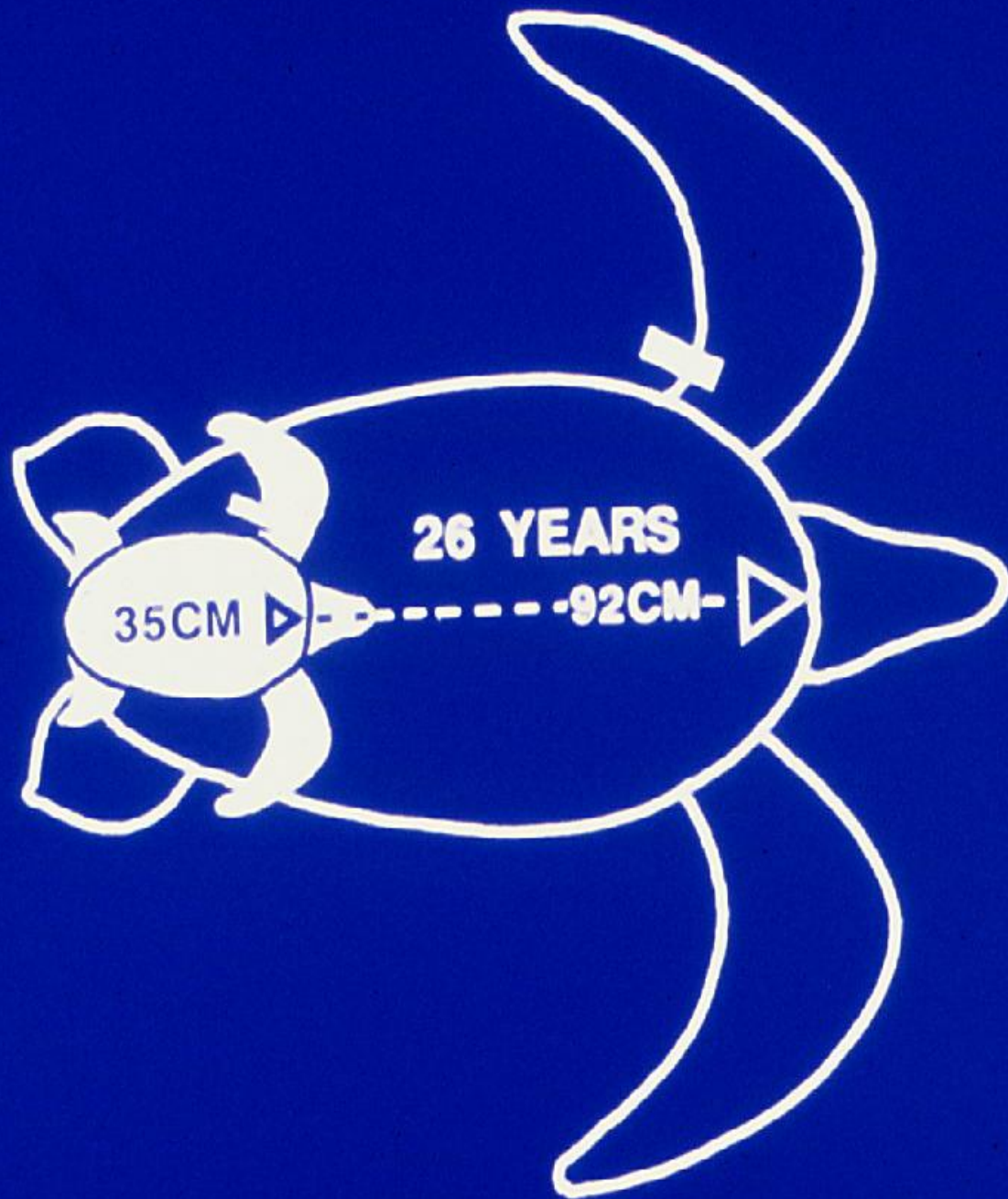
Dorsal View
(Top)

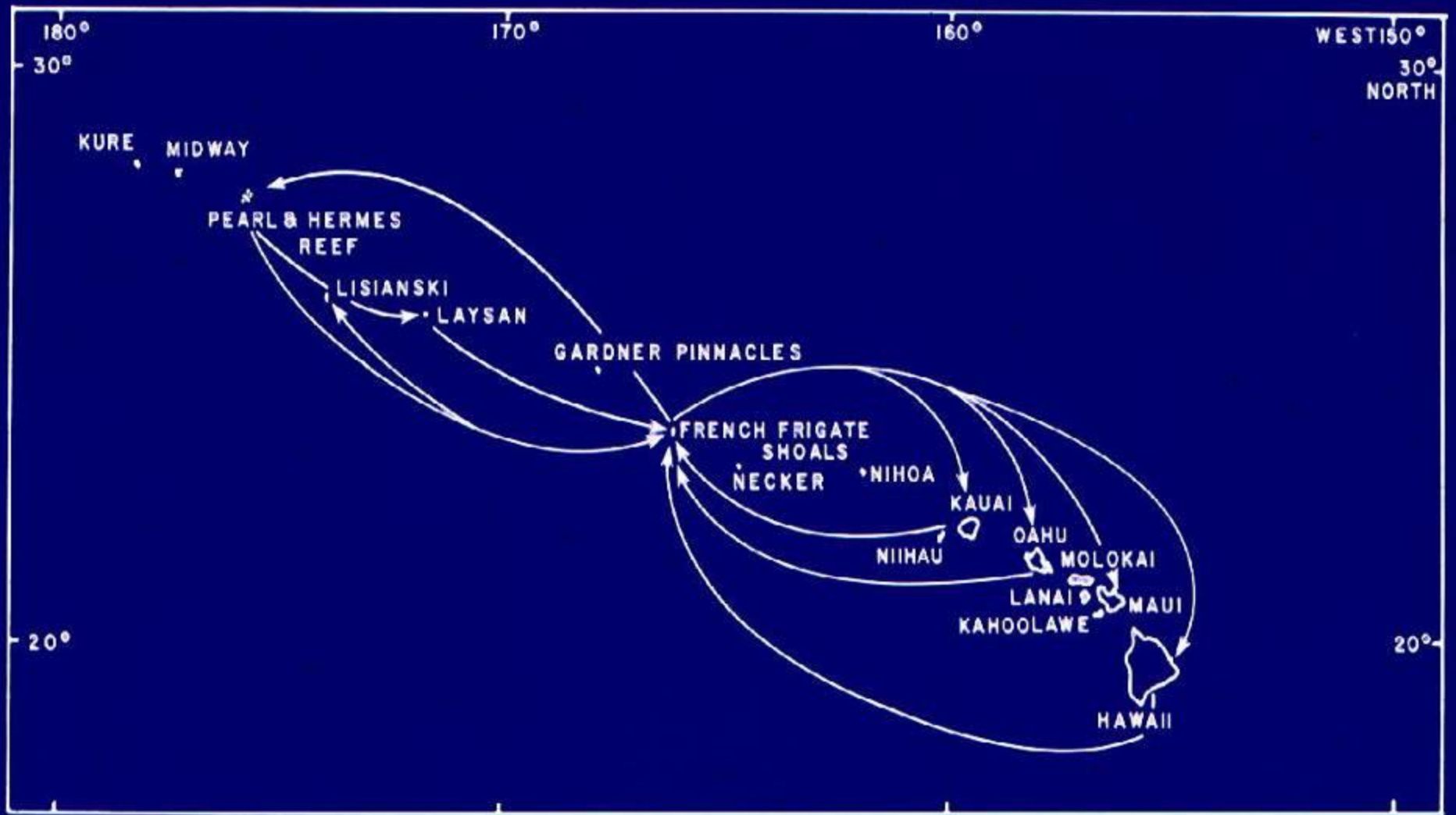


w-shaped beak

- Dark color
- No hard shell
- No scales
- 5-7 dorsal ridges
- W-shaped upper jaw or beak
- May attain great size











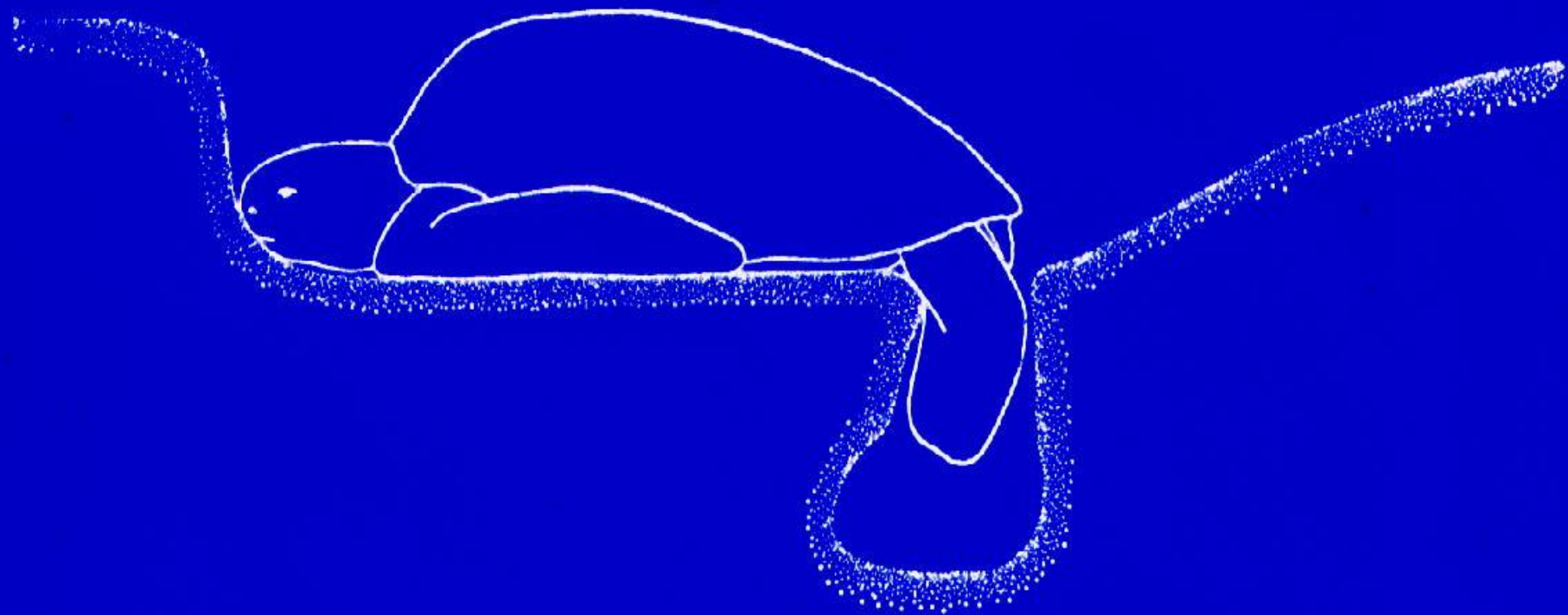


Except for the female during nesting, most marine turtles never again return to land after leaving the natal beach. However, a special exception exists for Hawaiian green turtles. On the undisturbed Refuge islands, both males and females regularly crawl up on the beaches where they bask peacefully in the sun for hours at a time.













Tim Clark











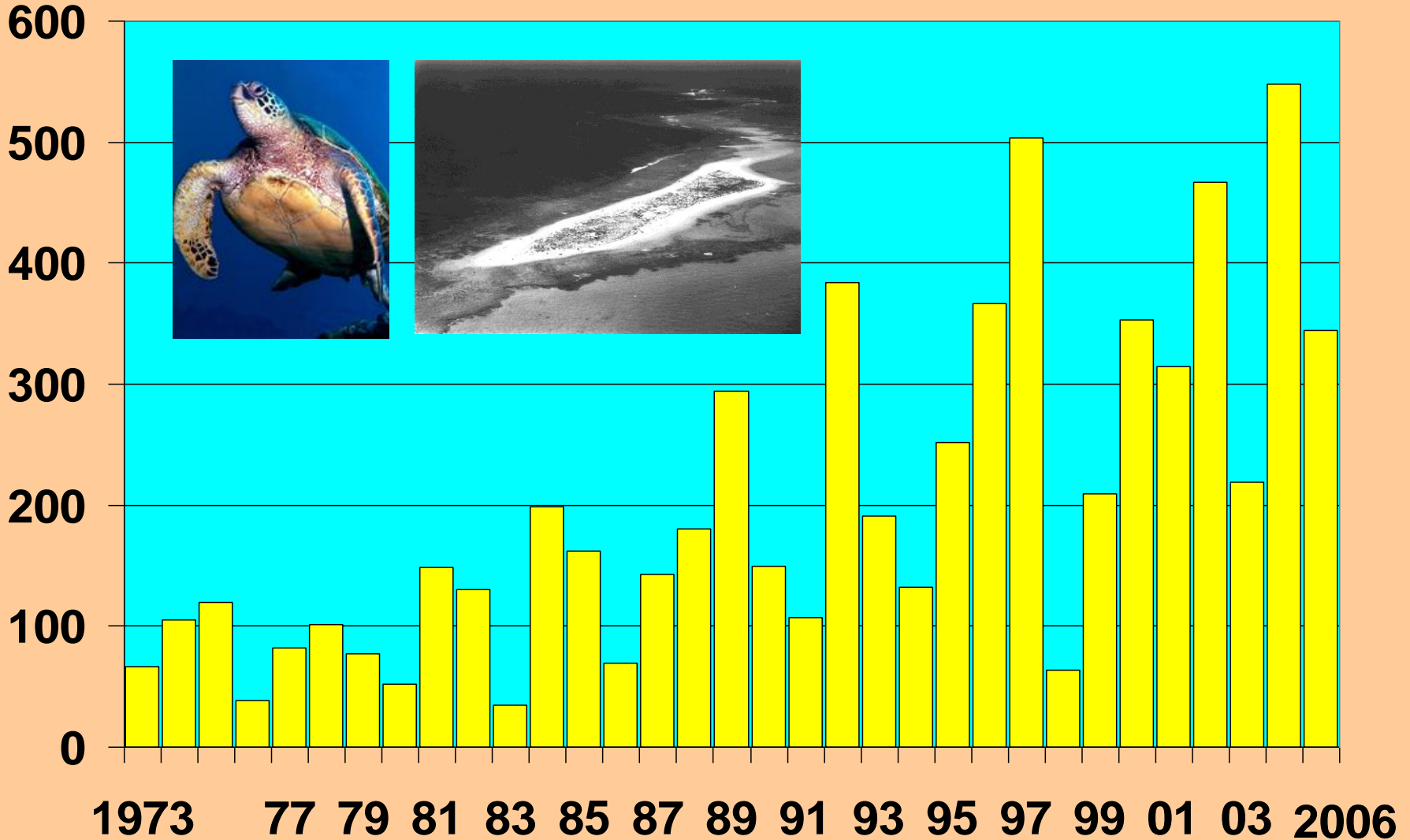






George H. Balazs

GREEN TURTLES NESTING AT EAST ISLAND FFS



ANNUAL TREND FOR 34 SEASONS





George H. Balazs











HELP HAWAIIAN SEA TURTLES WITH SAFE FISHING PRACTICES

Prevent the event

- **PLEASE KOKUA, DO NOT** cast your line where turtles are seen surfacing to breathe.

If you hook or entangle a turtle

- GENTLY** Bring turtle close to you, use dip net or firmly hold front flippers and shell to safely lift out of water.
- DO**
- **Cut line close to hook and remove line that has become entangled around turtle. AVOID** turtle's mouth and flipper claws; use blunt scissors/knife to cut line.
- DO NOT**
- **Do not lift turtle above water by pulling line - this will result in further injury. If distance to you from boat/pier/cliff is too great or turtle is too large, cut line as short as possible to release turtle.**
 - **Do not remove hook unless turtle is lightly hooked and it can be taken out without further injury. If uncertain, DO NOT remove hook.**

Turtles with serious cuts, ingested or deeply embedded hooks need veterinary care. Keep turtle in shade. Immediately call National Marine Fisheries' Marine Turtle Research Program: 983-5730 or, weekends and holidays, State of Hawaii DOCARE conservation hotline: 587-0077.

Place this sticker on your tackle box

www.nmfs.noaa.gov/prot_res/prot_res.html





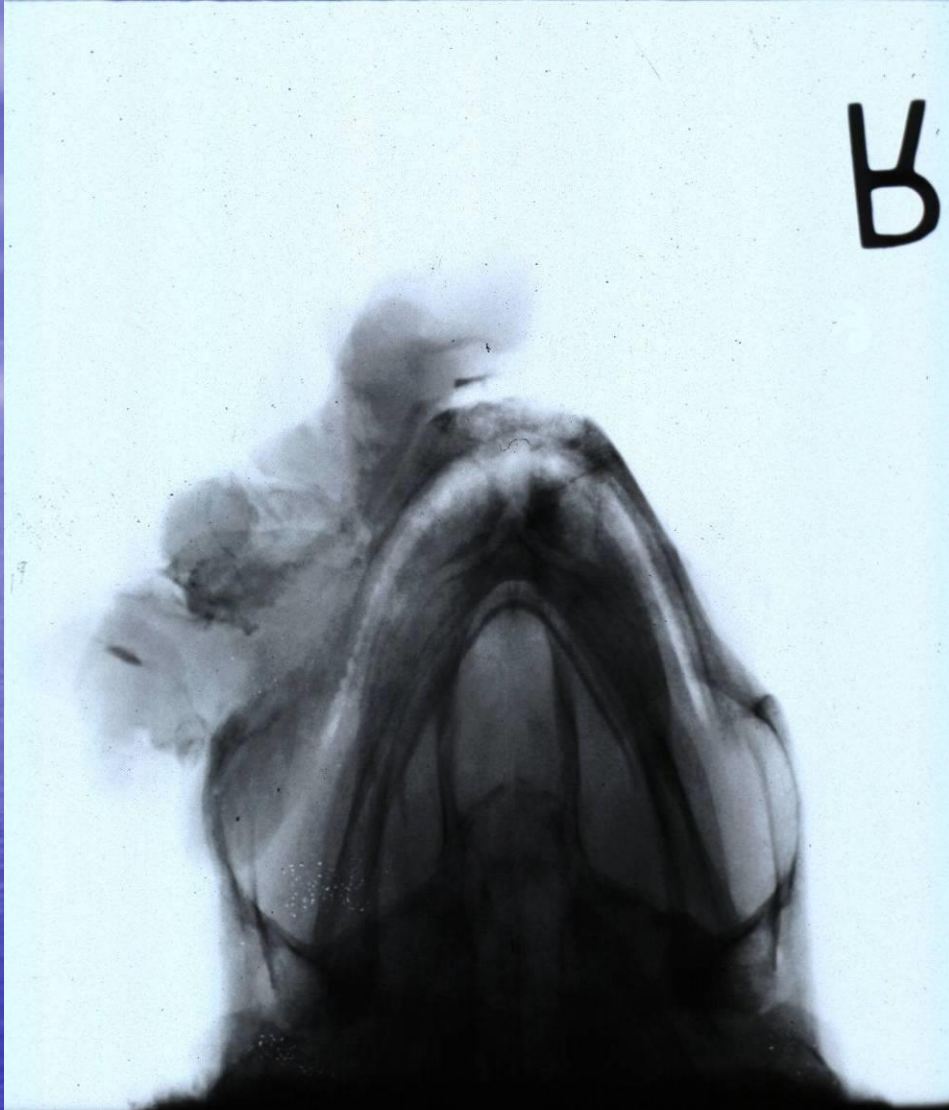


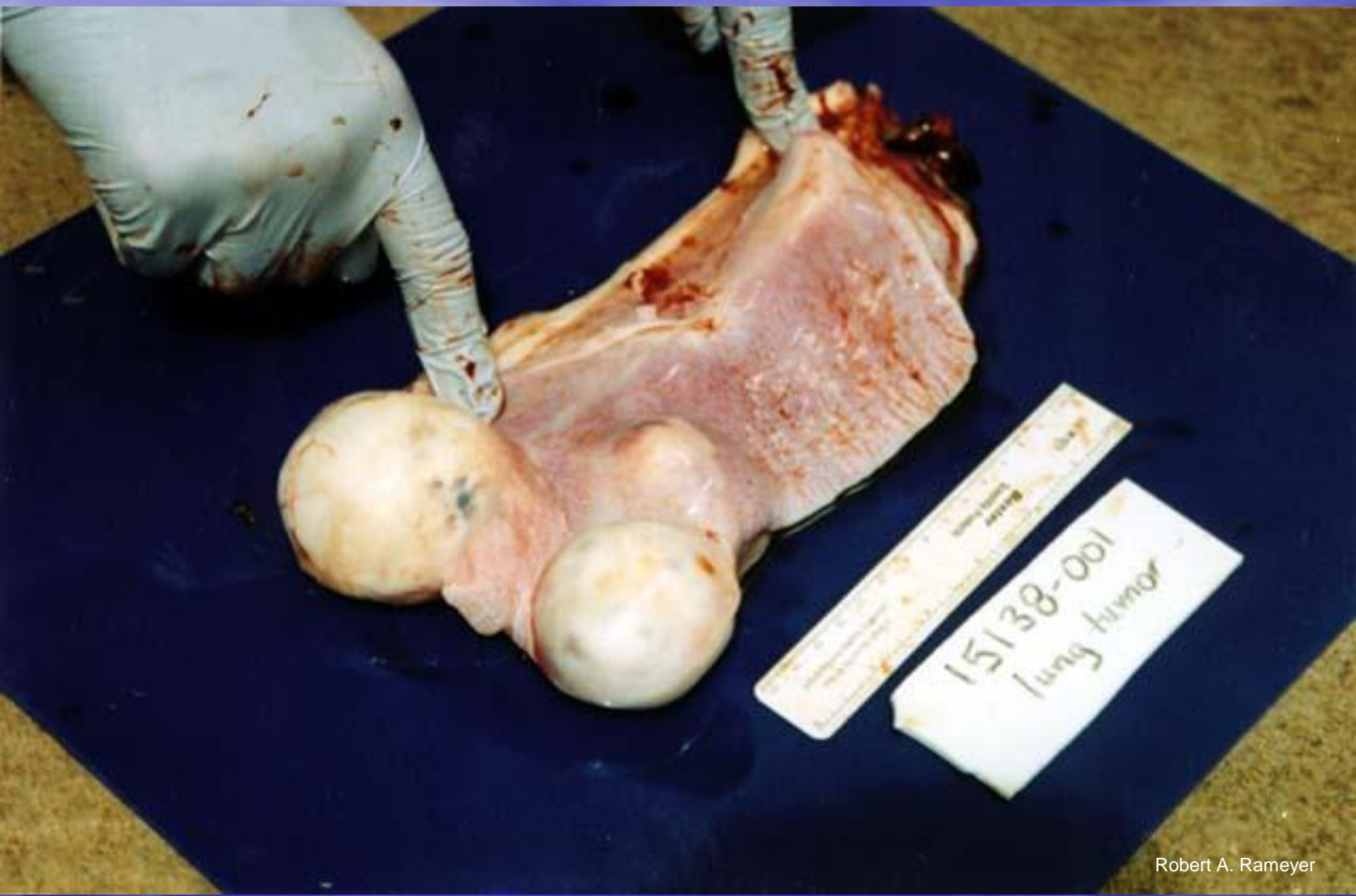


John Naughton



B













Robert A. Morris



123'02









FEDERAL BUREAU OF INVESTIGATION
LABORATORY
CASE NO. 100-100000-100
DATE 10/10/2000



INTEK





George H. Balazs



Marc Rice









Turtle Uplinks to Satellites

■ One of Mauna Lani Resort's recently released honu (Hawaiian green turtle) has been cruising the pelagic zones around the Hawaiian islands. This turtle, affectionately known as Mauna Lani Honu #22270, was fastened with a small, air-activated UHF transmitter enabling researchers to track its movements prior to being released 5 miles offshore this past June 20.

Honu #22270 was released with the help of Francis Ruddle and Steve Boreri of Mauna Lani Sea Adventures, and student Jill Quaintance of the Hawaii Preparatory Academy Sea Turtle Research Program. By July 16, the honu was southeast of the Big Island when it abruptly turned north away from the islands. August 7 marked the honu's venture west, where it neared Necker Island before heading south and then west toward home. After spending a few days traveling around the island of Maui, the honu eventually returned to the Big Island and was last detected south of 'Apua Point on the east side of the Big Island on November 28. The sea turtle is continuing to move south.

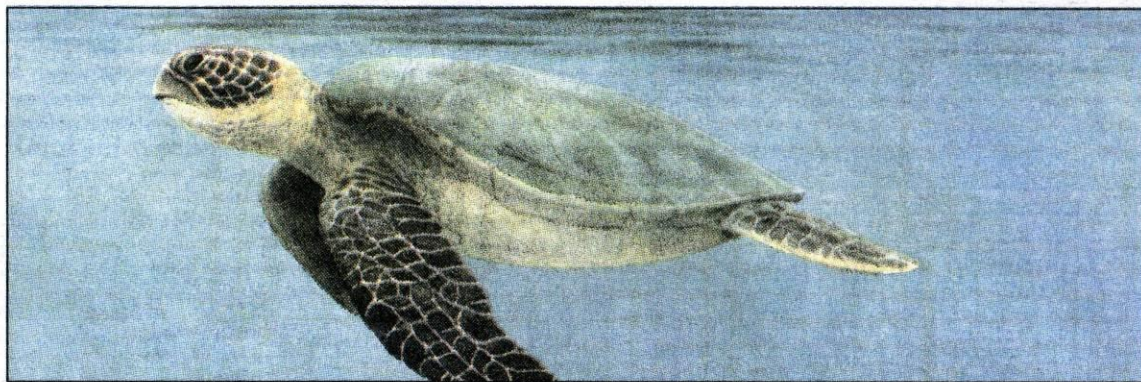
"From the inception of the Mauna Lani Honu Program, it has been our desire to educate the public and promote honu preservation in a research-oriented environment," said Mauna Lani Vice-President and Director of Resort Administration Sandie Patton, administrator for the resort's turtle program. "This high-tech tracking of the honu is very exciting, and it enhances the educational and research aspects of our program. We receive an updated tracking map approximately every week, and we have been sharing this information with various elementary school classrooms and turtle aficionados who are tracking the progress along with us."

When the turtle is on the ocean's surface, the transmitter periodically sends a signal to five orbiting NOAA (National Oceanographic and Atmospheric Association) satellites in what's called the ARGOS system, a joint project between the United States and France. The satellites relay the signal to ground stations where it is analyzed and relayed to the NMFS (National Marine Fisheries Service) Honolulu lab.

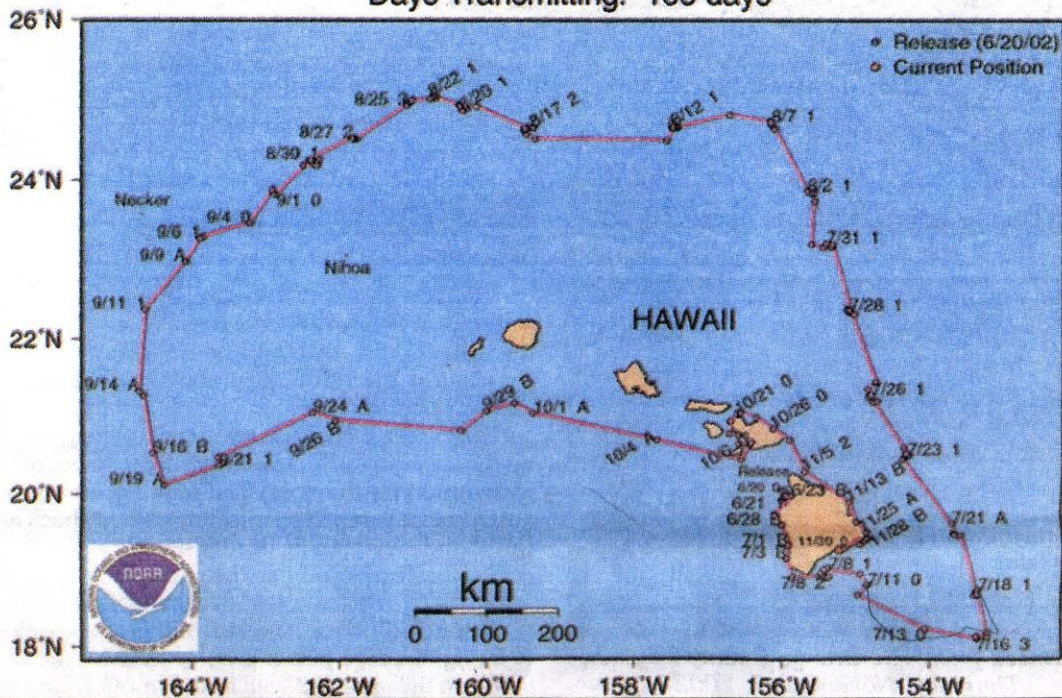
"We were hoping the turtle would take up life in the pelagic zones, and the good news is that it

Mauna Lani's 'Satellite Honu' Phones Home

by Diana Moody



Movement of Mauna Lani Juvenile Green Turtle 22270
Duty Cycle: 12 hr on, 48 hr off SCL: 45.5 cm
Days Transmitting: 165 days







P & V McCormick

ISLAND SCUBA



Try SCUBA with the New Discover Diving Program

Within 1 hour of fun, safe and exciting instruction in the swimming pool, you will be ready to go on a supervised Ocean Beach Dive. Space is limited so sign up in Advance! Daily 9:00 am, 11:00, 2:00 pm. \$20.00

Ocean Beach Dives

1 hour supervised dive for those who have completed the Discover Scuba Diving lesson, or for certified Divers. Enjoy a colorful Coral Reef Tour just steps off the beach. Six diver maximum per guide. Daily 9:00 am, 11:00, 2:00 and 3:30 pm. \$79.00

Go Beyond Snorkeling

Not Ready for SCUBA — Try SNUBA
Minimum 8 years old. Includes all gear, lesson, lunch & open Bar after the dive. Reservations required.

Scooter Dive

Travel farther and see more than ever with the sea shuttle. Travels at a maximum speed of 2 1/2 mph with a minimum of 40 minutes of running time. \$99.00 per person

To Reserve your Dive Call



Maui Marriott
(808) 667-4608
or **(808) 669-7751**



isiscuba@maui.net • www.scubadivingmaui.com

South Pacific Kayaks & Outfitters KAYAK

Snorkeling • Surfing • Hiking



Aloha and Welcome to Maui!!!

Step out of the ordinary and join us for some fun. We offer some great adventures for you to experience: try Kayaking and Snorkeling, take Surfing Lessons or join a Hiking Trek. Recognized and trusted for our great kayaking tours, our guests are finding the same personal service and hospitality with our surfing lessons and hiking adventures. We're dedicated to having fun and invite you to visit to experience it first hand. Friendly helpful staff, see our equipment, and have comfort in who we are and our services.



"delivered what you promised..."
"Safe, reliable, honest and professional..."
"A truly memorable adventure for all..."
"A great value!"
—Dr. M. Brett, Texas

We pride ourselves on being Ocean / Reef friendly, helping to keep our ocean resources healthy & safe for years to come. Keep Maui No Ka Oi. Choose responsibly.



808-875-4848

Toll Free: 1-800-77-OCEAN #2324

Member of the Hawaii Canoe & Kayak Association



Maui Diamond II

"The Molokini boat that everyone can enjoy"



Scuba Diving - 9 tanks

We take you on 9 completely different dives at Molokini or other favorite dive sites. There is so much to see and experience even 9 dives can't cover it all.

Introductory Scuba Diving

This is the best possible time to introduce yourself to scuba diving. We use the "P.A.D.I Discover Scuba" course to teach you all you need to know for your first dive at Molokini. This is the best place in the world to begin your scuba diving experience. All equipment and instruction included.

Snorkeling

We provide all of the snorkel gear you just have a great time in the water.



Trip Includes

Continental breakfast, deli lunch and sodas, free use of complete dive gear and snorkeling equipment

Don't Forget - towels, sunglasses, cameras, suntan lotion and your certification card.

Call Maui Diamond II

"The Molokini boat that everyone can enjoy"

Maalaea Harbor, Slip #23

879-9119

Toll Free 1-888-477-5484

Custom & Private charters available

*Molokini weather permitting. 24 hour cancellation required. Underwater Photos by Bryce Foto











MAHALO!



Chad Yoshinaga