

MANUAL OF SEA TURTLE RESEARCH
AND CONSERVATION TECHNIQUES

ANNEX I

COLOR PLATES

NO. 1 - No. 40

- PLATE 1. Adult male loggerhead. Note secondary male sex characteristics--tail extends well beyond a narrow, tapered carapace. Large head and reddish-brown carapace are characteristic of this species. (Photo, L. Ogren).
- PLATE 2. Adult male loggerhead. Cloacal opening is located near tip of tail beyond posterior margin of carapace. Broad head is evident. Black sulfide-stained plastron is result of prolonged contact with silty bottom and is not typical of species. (Photo, L. Ogren).
- PLATE 3. Sub-adult loggerhead. Two pairs of prefrontal scutes between eyes, five pairs of lateral scutes on carapace, and reddish-brown dorsal pigmentation are characteristics of this species. (Photo, L. Ogren).
- PLATE 4. Sub-adult loggerhead. Three pairs of enlarged inframarginal scutes bridging the yellowish plastron are characteristic of this species. Marginate scutes of carapace are common in immature individuals. (Photo, L. Ogren).
- PLATE 5. Juvenile loggerhead. Dorsal scutes have dark brown lines radiating from light centers. Each center is elevated and forms a sharp keel of spine characteristic of this age class. Photograph is of a 10-month-old individual raised in captivity. (Photo, Skidaway Institute of Oceanography).
- PLATE 6. Hatchling loggerheads. Variation in intensity of pigmentation between siblings is evident. Species characteristics regarding scute and scale number and arrangement are similar to adults. (Photo, L. Ogren).
- PLATE 7. Hatchling loggerhead. Specimen is typically colored, but has an extra pair of posterior lateral scutes and an extra pair of enlarged inframarginal scutes. Posterior pair of lateral scutes is asymmetrical. Umbilical scar is present. (Photo, L. Ogren).
- PLATE 8. Juvenile Kemp's ridley and juvenile green turtle. The uniform black carapace is typical for Kemp's ridley up to about 28 cm carapace length (CL). The green turtle exhibits a pattern of broadly radiating streaks on each dorsal scute, which is typical of immature individuals. The head of the green turtle is proportionately smaller than heads of other species. The central keel of the carapace of immature Kemp's ridley is more pronounced than in adults. (Photo, L. Ogren).



1. Loggerhead



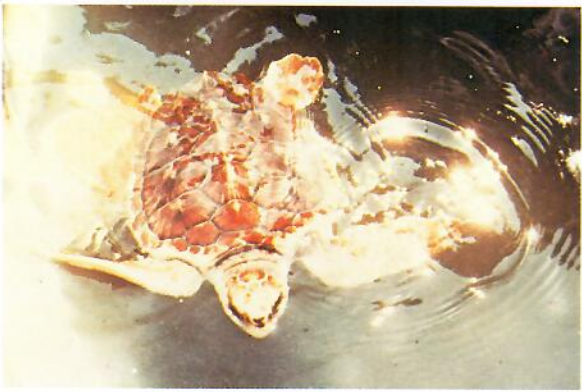
2. Loggerhead



3. Loggerhead



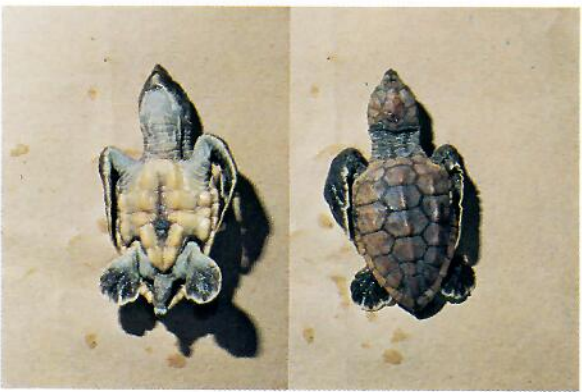
4. Loggerhead



5. Loggerhead



6. Loggerhead

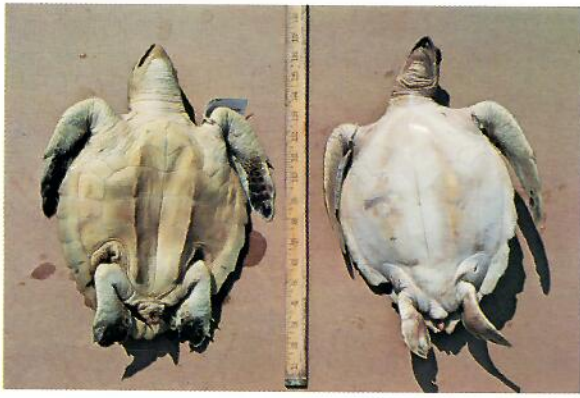


7. Loggerhead



8. Kemp's Ridley (L.), Green (R.)

- PLATE 9. Juvenile Kemp's ridley and juvenile green turtle. Note keels on Kemp's ridley plastron and four pairs of enlarged inframarginal scutes, each with a pore centered on the posterior seam. The smooth, white plastron is typical of immature green turtles. (Photo, L. Ogren).
- PLATE 10. Sub-adult Kemp's ridley. The olive-gray carapace of this older individual has replaced the black juvenile pattern except along the seams of the scutes. Distinct oval-shaped carapace, with five pairs of lateral scutes, and two pairs of prefrontal scutes are characteristic of this species. (Photo, L. Ogren).
- PLATE 11. Sub-adult Kemp's ridley. The yellowish plastron is typical of older individuals. Four pairs of enlarged inframarginal scutes bridging the plastron are present. The inframarginal pores are not clearly visible in this photograph. (Photo, L. Ogren).
- PLATE 12. Sub-adult Kemp's ridley. The small orbit located high on the skull above the deep upper jaw (supralabial scale) creates a parrot-like appearance--thus the Spanish vernacular name for this species, Tortuga Lora. The grey dorsal pigmentation of this immature individual is transitional between the black juvenile and light olive-green adult. (Photo, L. Ogren).
- PLATE 13. Juvenile Kemp's ridley. The three elevated keels on the carapace, black dorsal pigmentation, and white plastron are typical of this age class. Photograph is of a nine-month-old individual (10 cm CL) raised in captivity. (Photo, L. Ogren).
- PLATE 14. Hatchling Kemp's ridley. Kemp's and olive ridleys are the only species that have uniformly dark or black hatchlings. The five pairs of lateral scutes are typical for this species. Umbilical scar is present. (Photo, L. Ogren).
- PLATE 15. Adult olive ridley. The dark olive carapace and the large and variable number (6-9) of lateral scutes are typical of this species. The oval-shaped carapace is characteristic of both ridley species. (Photo, P. Pritchard).
- PLATE 16. Adult male hawksbill. Note the brightly patterned carapace with thick, overlapping scutes. Scutes in juveniles and older mature individuals are not overlapping. Hawklike narrow jaws and four pairs of lateral scutes are characteristic of this species. Elongate tail is exposed beyond posterior margin of carapace. (Photo, Miami Seaquarium).



9. Kemp's Ridley (L.), Green (R.)



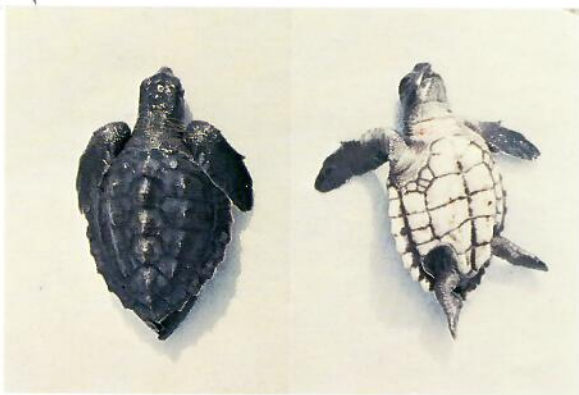
10. Kemp's Ridley



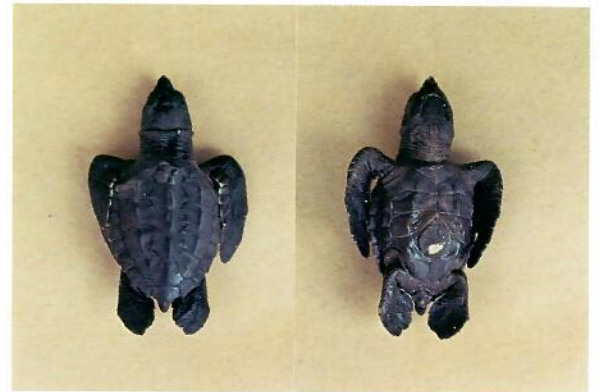
11. Kemp's Ridley



12. Kemp's Ridley



13. Kemp's Ridley



14. Kemp's Ridley



15. Olive Ridley



16. Hawksbill

- PLATE 17. Adult male hawksbill. Note the elongated tail with the terminal cloacal opening (vent). The plastron and ventral area are yellow. The narrow jaws are characteristic of this species. (Photo, Miami Seaquarium).
- PLATE 18. Adult hawksbills. Color variation between individuals is great. Two pairs of prefrontal scales between the eyes are present in all of these individuals and are characteristic of this species. (Photo, P. Pritchard).
- PLATE 19. Adult female hawksbill. Bright or wet appearance of carapace temporarily lost while nesting. Note that the tail does not extend well beyond carapace. (Photo, L. Ogren).
- PLATE 20. Hatchling hawksbills. Variation in coloration between individuals is evident. Superficially, these individuals resemble loggerhead hatchlings, but can be identified by their four, not five, pairs of lateral scutes. (Photo, L. Ogren).
- PLATE 21. Hatchling hawksbill. Dorsal and ventral coloration and scute number and arrangement are typical. Note that the four pairs of lateral scutes on the carapace are all about equal in size. (Photo, L. Ogren).
- PLATE 22. Adult female green turtle. Relatively small head and four pairs of lateral scutes on carapace are characteristic of this species. Color of carapace has changed from immature pattern (Plate 8) to an olive-brown with a scattering of dark spots. Carapace of this species varies from light brown to almost dark. (Photo, P. Pritchard).
- PLATE 23. Adult female green turtle. Color and pattern temporarily obscured by drying of carapace while nesting. Small, rounded, and symmetrically shaped head is characteristic of this species. Female lacks the elongated tail. (Photo, L. Ogren).
- PLATE 24. Adult male green turtle. Light yellow ventral area is characteristic of the adults of this species. The sexually dimorphic and muscular tail of the male and distal position of cloacal opening are evident in photograph. (Photo, L. Ogren).



17. Hawksbill



18. Hawksbill



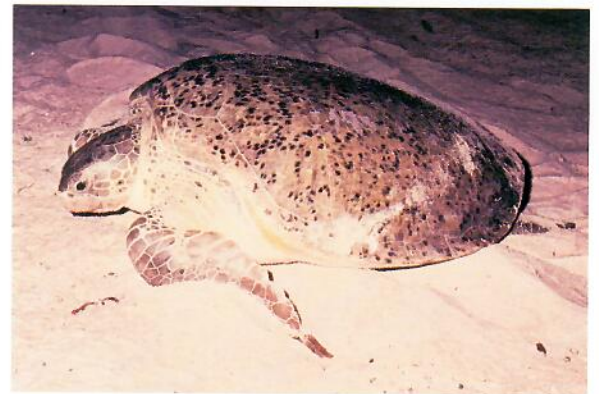
19. Hawksbill



20. Hawksbill



21. Hawksbill



22. Green



23. Green



24. Green

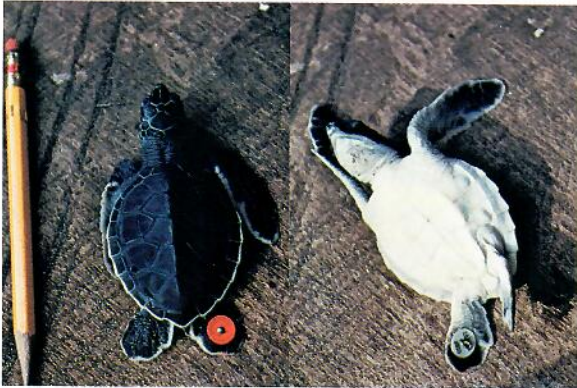
- PLATE 25. Adult green turtle. Unique scale pattern of the head for this species is clearly depicted by the single pair of prefrontal scutes between the eyes. Biting edge of the lower jaw is serrated (not visible in photograph) and is unique to this species. (Photo, P. Pritchard).
- PLATE 26. Juvenile green turtle. This individual falls within the size range of the age class commonly referred to as "yearling." This is about the smallest size that occurs in coastal waters other than hatchlings migrating away from their natal beach. (Photo, L. Ogren).
- PLATE 27. Post-hatchling green turtle. The color and scute arrangement of this three-week old individual is typical of newly emerged hatchlings. Note the four pairs of lateral scutes and single pair of prefrontals, which are characteristic of this species. (Photo, L. Ogren).
- PLATE 28. Adult female leatherback. Black dorsal area flecked with white spots and the absence of scutes are characteristic of this species. The seven dorsal longitudinal ridges run parallel to the body axis. (Photo, P. Pritchard).
- PLATE 29. Adult female leatherback. Some individuals are distinctly darker dorsally than others, but the ventral region is predominantly lighter in color. Four of the longitudinal ridges can be seen on the right side of this individual. The front limbs are very long and the skin is rubbery to the touch. (Photo, L. Ogren).
- PLATE 30. Adult female leatherback. The unusual tooth-like cusps on the upper jaw are visible in this photograph. The pinkish cast to the central area is most conspicuous where the dark pigment is absent. (Photo, P. Pritchard).
- PLATE 31. Juvenile leatherback. Photograph is of a several-month-old individual raised in captivity. A mosaic of small scutes is present in hatchlings, but is shed after one or two months. (Photo, P. Pritchard).
- PLATE 32. Hatchling leatherbacks. This typical color pattern for hatchlings remains almost unchanged in the adult, except that the light markings on the dorsal ridges and flippers become obscure or disappear. The hatchlings are densely covered with a mosaic of small deciduous scales. (Photo, L. Ogren).



25. Green



26. Green



27. Green



28. Leatherback



29. Leatherback



30. Leatherback



31. Leatherback



32. Leatherback

- PLATE 33. Adult flatback. The characteristic three postocular scales are evident in this individual. The green turtle usually has four. (Photo, C. Limpus).
- PLATE 34. Subadult flatback. The juvenile pattern has changed to a uniform olive-bluff carapace without markings. The borders between the carapace scutes are indistinct. (Photo, P. Pritchard).
- PLATE 35. Juvenile flatback. This species is larger at hatching than the green turtle and soon loses the unique dorsal markings and coloration. (Photo, P. Pritchard).
- PLATE 36. Adult male black turtle. The intensity of black pigment is characteristic of this species. The flipper injuries were caused by bites of other males competing for access to the female mounted by this individual. (Photo, P. Pritchard).
- PLATE 37. Adult male and female black turtle. Note the heavily pigmented carapace and dorsum of both individuals. The male's tail is much longer than the female's. (Photo, P. Pritchard).
- PLATE 38. Adult female black turtle. The heavy set of barnacles is unusual in the green turtle. The deep "mating scar" in the shoulder region is from the nail on the male's foreflipper used in grappling the female. (Photo, P. Pritchard).
- PLATE 39. Hatchling black turtle. Coloration is similar to the green turtle, but the plastron soon darkens with age. (Photo, P. Pritchard).
- PLATE 40. Adult hawksbill. The narrow jaws are characteristic of this species--an adaptation for feeding on reef prey such as sponges. (Photo, P. Pritchard).



33. Flatback



34. Flatback



35. Flatback



36. Black Turtle



37. Black Turtle



38. Black Turtle



39. Black Turtle

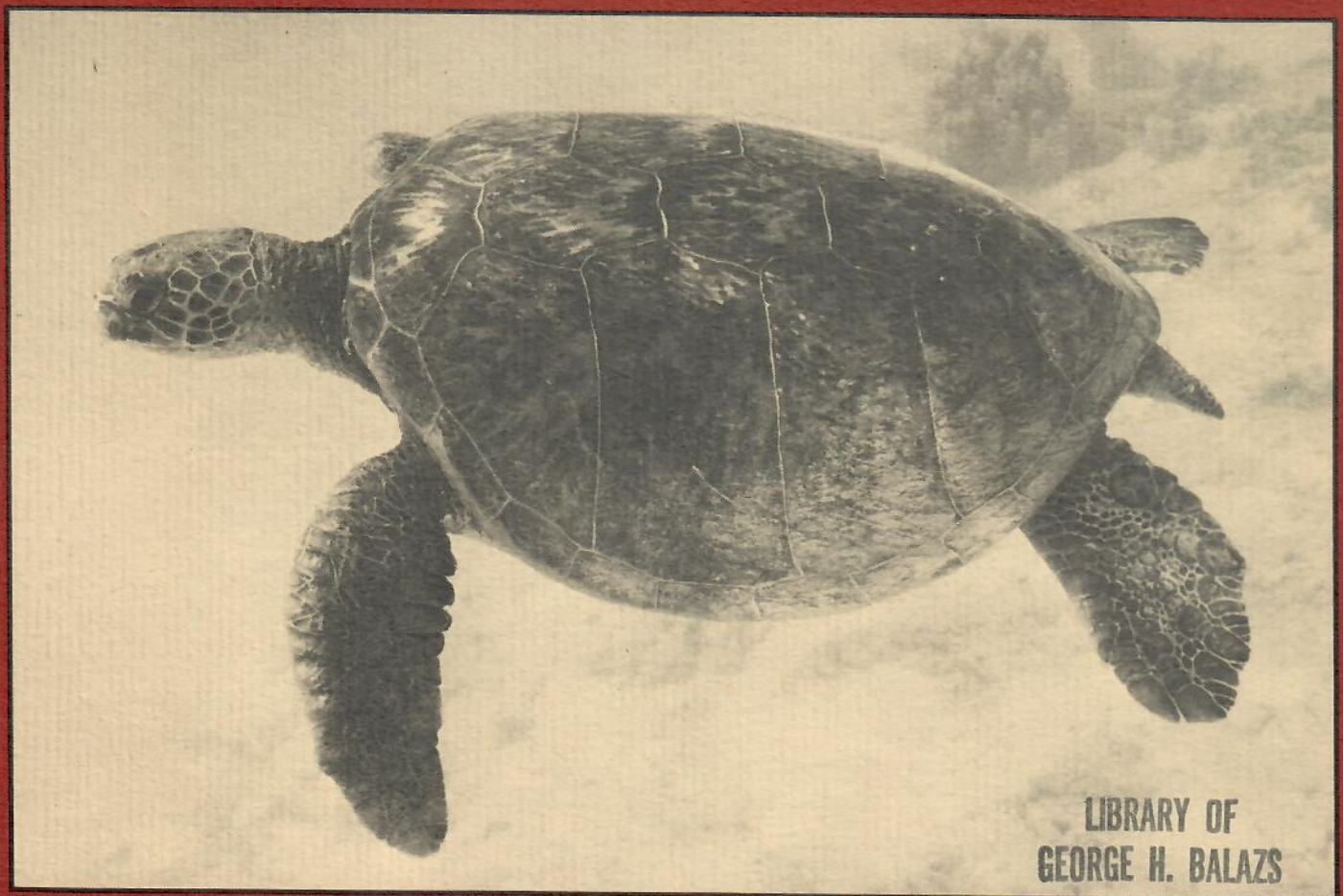


40. Hawksbill

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