

The NOAA Galveston Laboratory has been raising sea turtles in captivity since 1977. Most notable is the Kemp's ridley headstart program [1978-1992] which captive reared up to 2,000 Kemp's ridley hatchlings per year until they were large enough to receive up to 4 tags, then they were released into the wild in the Gulf of Mexico. From 1978-1989, Kemp's ridley eggs were taken from the nesting beach at Rancho Nuevo, Tamaulipas, Mexico and artificially incubated at Padre Island National Seashore [PINS] near Corpus Christi, TX. When the hatchlings emerged, they were allowed to imprint on the beach at PINS and briefly swim in the Gulf of Mexico before they were netted and transported to the NOAA Galveston Laboratory for headstarting. Kemp's ridleys were tagged starting with the living tag at 7-9 months of age, then flipper tagged, coded wire tag, and passive integrated transponder tag [PIT starting in the late 1980s] just prior to release. Kemp's yearlings from 1978-1992 were primarily released offshore of Padre Island in the Gulf of Mexico. Starting in 1990, Kemp's ridleys hatchlings [2,000 per year] that were imprinted at Rancho Nuevo, Mexico, were brought directly to NOAA Galveston for headstarting. These yearling Kemp's ridleys were released offshore of Galveston, Texas. From 1993-2000, 180-200 Kemp's ridley hatchlings were gifted to NOAA Galveston from the government of Mexico and these hatchlings were captive reared in the same manner as headstarted turtles, but were released offshore of Galveston, Texas. Post-headstart Kemp's ridleys were used for testing and evaluating Turtle Excluder Devices [TEDs] and for physiology and tag development experiments. In 2013, 100 Kemp's ridley hatchlings were collected from 3 nests on South Padre Island, Texas, and they were captive reared for a year and used for testing TEDs for skimmer trawls. The 2013 year class Kemp's ridleys were released offshore of South Padre Island in 2014. In preparation for Kemp's ridleys starting in 1978, the NOAA Galveston Laboratory received 2,000 loggerhead hatchlings in 1977 to test sea turtle rearing facilities which were modified shrimp rearing tanks. During the Kemp's ridley headstart program, Florida loggerheads were raised alongside the Kemp's ridleys. The captive rearing of loggerheads was not part of the headstart program. Loggerheads were used as both yearling and 2 year olds for developing and certifying TEDs. From 2001-2016 [except 2013], the NOAA Galveston Laboratory raised only Florida loggerheads sourced as hatchlings from beaches in Clearwater, Sarasota, Ft. Lauderdale, Boca Raton, Juno Beach, and Melbourne Beach, Florida. The loggerhead captive rearing program was a joint project with the State of Florida's Department of Environmental Protection [FDEP] and then the Florida Fish and Wildlife Conservation Commission [FWC]. Loggerhead hatchlings were collected post emergence in cages, or excavated just prior to emergence depending on the location of collection. In 1996, a wild loggerhead sea turtle nested on the Bolivar Peninsula, Texas and the eggs were sent to PINS for incubation. Thirty of the 1996 Texas loggerhead hatchlings from the Bolivar clutch were collected at PINS and transported to NOAA Galveston for captive rearing and use in tag development and TED testing research. Loggerheads were used for a variety of physiology, pharmacokinetic, sensory and behavioral experiments as well as tag development, hook and bait research related to the pelagic longline fishery. Loggerheads were captive reared for up to 4 years depending on the research need. During captive rearing, sea turtles are regularly weighed and measured, usually on a 4 week interval. Morphometric measurements such as carapace length, carapace width, body depth and weight are taken to track growth and health. Measurements may be taken on all sea turtles within a year class or a smaller sub-set and the average used for the entire year class. Morphometric measurements may be taken more frequently than every 4 weeks if a critical need arises for a specific sized sea turtle for research project. When tags are applied, the codes and locations of those tags are recorded in the database corresponding to the year class of the sea turtles. Sometimes multiple tags of the same kind were applied as part of tag research programs. When research is completed, the turtles are released back into the wild in a location that best matches the natural location where a sea turtle of that size might be found. Florida loggerheads were typically released back in Florida waters or Federal waters offshore of the State of Florida. Body weight is used to calculate food rations and sea turtles are raised to whatever size is required for fisheries research. A two-year-old loggerhead raised at the NOAA Galveston Laboratory is the scientific standard for testing and certifying TEDs. The two-year-old loggerhead is used as a surrogate for a 2-3-year-old Kemp's ridley, which is the smallest size sea turtle encountered in the Gulf of Mexico [GOM] shrimp fishery in the and Southeast Atlantic in the USA. The NOAA Galveston Laboratory is the only place in the world where sea turtles are raised in captivity specifically for fisheries research. Records on the feeding rates of each species, of each yearclass are maintained daily as are data on water quality, animal husbandry cleaning schedules, number of people visiting the facility, and general maintenance.