

REPRODUCTIVE DATA ON A FEMALE LEATHERBACK TURTLE,  
*DERMOCHELYS CORIACEA*, STRANDED IN NEW JERSEY

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REPRODUCTIVE DATA ON A FEMALE  
LEATHERBACK TURTLE, *DERMOCHELYS*  
*CORIACEA*, STRANDED IN NEW JERSEY.—

The marine leatherback turtle, *Dermochelys coriacea*, is widely distributed in the western Atlantic. Nesting on tropical and subtropical beaches, the species ranges well into temperate and boreal waters as far north as Labrador (Bleakney, 1965; Pritchard, 1971, 1980; Lazell, 1980). Physiologic and anatomic data indicate that the leatherback is well adapted to a cold-water habitat, possessing several features of warmblooded animals (Frair et al., 1972; Greer et al., 1973; Rhodin et al., 1980, 1981).

The main diet of the leatherback appears to be the Arctic jellyfish, *Cyanea capillata* (Bleakney, 1965; Lazell, 1980). Lazell (1980) argued that migrations between tropical and boreal waters are designed to maximize opportunities for feeding on *Cyanea*. Whether these migrations occur on a regular basis remains unclear (Pritchard, 1976; Lazell, 1980). It is also unclear at what frequency *D. coriacea* nests, though most data indicate that the cycle may be every two or three years (Pritchard, 1971). Presumably, northward migrations follow the completion of the nesting process.

Lazell (1980) wrote that males commence their northward migration after mating at the onset of the nesting season. Whether females that have finished nesting make a long northward migration in the same season is not known. Both Lazell (1980) and Pritchard (1976) felt that only females in their non-nesting years migrate into boreal waters, whereas post-nesting females remain in the general vicinity of the nesting beach for a full season, or make a short migration into subtropical waters. We now re-

port reproductive data from a single animal that provides at least one data point to answer the question of migration in post-nesting females.

On 24 Aug. 1979 we obtained a dead female *D. coriacea* of 145 cm carapace length (straight-line) that was found stranded in Atlantic City, New Jersey (latitude 39°22'N.). It had been damaged by propeller cuts on the carapace, and the head, front flippers and one rear flipper were missing, possibly from shark attacks. Based on the state of muscular and visceral necrosis it was estimated that the animal had been dead for only a few days. Exposed at one of the damaged inguinal openings were several shelled eggs, with some of them outside the body, "dripping" down on the sand. It is highly possible that several eggs had already been lost before the specimen was collected. Twenty-three shelled eggs were obtained. Three of these were large yolked eggs of from 51 to 52 mm in diameter, the other 20 were yolkless eggs varying in diameter from 15 to 41 mm. The large eggs are the normal size of mature *D. coriacea* eggs. The smaller eggs are the normal yolkless eggs which appear in varying numbers toward the latter part of every clutch laid (Pritchard, 1971).

We interpret these findings to mean that the animal had recently left her nesting grounds. Whether the eggs represent a portion of an unlaidd last clutch of the season or simply a few retained eggs following the last nesting cannot be answered. The sizes of the eggs and the fact that they were shelled indicate that she was probably either just ready to lay her last clutch or that she had recently done so. No verified nestings of *D. coriacea* have been described north of peninsular Florida (1500 km south of Atlantic City). A single report from North Carolina (Schwartz, 1976) is questioned by Lazell (1980). The end of the nesting season in the Caribbean (including southern Florida) is around the last week in July. If the animal began its migration from the small nesting colony along the central Atlantic coast of Florida at the end of the normal nesting season it would have needed to travel at approximately 50 km/day to reach its destination by 24 Aug. If it came from the much larger French Guiana colony in the last week of the season, then its speed of travel would have been about 135 km/day. It is, of course, equally possible that the animal left its nesting grounds earlier than the end of the season, in which case no estimates can be made

regarding speed of travel. It may also be possible that the presence of eggs in this animal indicates that her last (or next) nesting may have occurred in the New Jersey area, but this possibility is not supported by known nesting data. Of note is that 24 Aug. is still early in the New England turtle season which extends through October. Had this animal not met her demise when she did, then she may have continued her migration to reach more northerly New England waters.

In conclusion, this report supports Lazell's (1980) theory that post-nesting females can make at least a short migration northward. Further, it suggests that they are also capable of making very long, swift migrations. Whether females reach boreal waters only in non-nesting years remains to be seen.

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