Unusual Offshore Occurrence of an American Alligator

RUTH M. ELSEY*

Abstract - An American Alligator (Alligator mississippiensis Daudin) was observed and photographed in the Gulf of Mexico on 4 May 2004, some 56 km south of Marsh Island, LA (approximately 63 km from the nearest point on mainland Louisiana). Alligators generally avoid saltwater and we are unaware of prior documentation of an alligator occurring this distance offshore.

Introduction

The American Alligator (Alligator mississippiensis Daudin) occurs in wetlands of several southeastern states, and its range includes coastal marshes adjacent to the Gulf of Mexico (Joanen and McNease 1987). In Louisiana, alligators prefer aquatic habitats of low salinity, and are more numerous in freshwater lakes or bayous, or marshes categorized as intermediate, or dominated by vegetation able to tolerate low salinity levels. In general, alligators become less common in brackish marshes and nesting is rare in salt marshes (Elsey and Kinler 2004). Saltwater Crocodiles (Crocodylus porosus Schneider) have functional lingual salt glands that are essential to osmoregulation in salt water (Taplin and Grigg 1981). The lingual glands in alligators are thought to be salivary rather than salt glands, due to low secretory rates of essentially isosmotic secretions (Taplin et al. 1982); thus, alligators poorly tolerate hyper-saline conditions (Mazzotti and Dunson 1984). The American Crocodile (Crocodylus acutus Cuvier) is the only other crocodilian found principally in saline habitats (Taplin et al. 1982), though four species (including the American Alligator, Crocodylus niloticus Laurenti, C. palustris Lesson, and C. johnstoni Krefft) occur occasionally in saline waters (Neill 1971, Taplin et al. 1982).

Observations and Discussion

On 4 May 2004, an alligator was observed by offshore oil company employees working on an oil platform and adjacent barge. The platform (Eugene Island - 133) is located at north 28°58.39' latitude and west 91°51.00' longitude. These coordinates put the alligator far in the Gulf of Mexico, some 56 km south of Marsh Island. The nearest distance to mainland Louisiana from the alligator’s location was approximately 63 km from Point Au Fer to the east, or 74 km to Freshwater Bayou to the west (Fig. 1). The water depth at this location is approximately 23.62 m.

I interviewed two gentlemen who observed the alligator on site. Mr. Anthony Jackson, an operator for Chevron, USA, saw the alligator from the

*Louisiana Department of Wildlife and Fisheries, Rockefeller Wildlife Refuge, 5476 Grand Chenier Highway, Grand Chenier, LA 70643; relsey@wlf.louisiana.gov.
oil production platform. Mr. Johnny Migues, a construction supervisor for Kellogg, Brown, and Root, was on a jack-up boat adjacent to the platform and photographed the alligator (Fig. 2). The following description is a composite of the details provided by the two witnesses.

Both observers estimated the alligator to be at least 183 cm total length and possibly closer to 213 cm in length. It approached the platform from the south/southeast sometime after 12:00 noon on 4 May 2004. It swam normally and dove intermittently. Both witnesses suggested the alligator circled the platform, possibly trying to find a surface upon which to rest. The alligator stayed in the vicinity of the platform and boat for several hours; Mr. Migues said the alligator was still swimming nearby when he left the platform area on the jack-up boat near dusk. Mr. Jackson (who works permanently at EI-133) said he has not seen the alligator subsequent to the afternoon of 4 May.

Mr. Migues stated that in 29 years of employment on offshore oil rigs, he has never before seen an alligator offshore. Mr. Jackson has seven years experience working offshore, and has only once previously seen an alligator in the Gulf of Mexico. At the time he was on a platform approximately 16.09 km offshore. That alligator was swimming westward and never slowed or altered its course. I asked several helicopter pilots who routinely fly oilfield crews to offshore platforms if they had ever observed alligators in transit; none had, although they often fly at altitudes which would preclude direct observation.

Numerous physiological studies have illustrated that juvenile alligators poorly tolerate increasing water salinity (Lance et al. 2001, Lauren 1985, Morici 1996) which causes increased plasma corticosterone and decreased growth rates.

However, we have seen numerous cases in which alligators traveled from mainland Louisiana (St. Mary, Terrebonne, and Vermilion Parishes) to Marsh Island, having traversed several km across Vermilion Bay (Campbell and Kinler 2001, Elsey et al. 2001). The salinity in Vermilion Bay varies seasonally with addition of flood waters from adjacent river systems (Vermilion and Atchafalaya Rivers) and ranges from essentially freshwater to approximately 10–15 parts per thousand. It is unclear why such dispersal across hyper-saline

Figure 1. Map of Louisiana showing location of alligator sighted far in the Gulf of Mexico. Note alligator was seen at a point some 56 km south of Marsh Island, and approximately 63 km from the mainland at Point Au Fer.
waters occurs. We recently documented numerous cases of long-distance movement in alligators, including a female alligator that moved some 90 km from the initial capture site over a three year period (Elsey et al. 2004), although this dispersal was via non-saline waterways and possibly over land.

We have also had numerous reports of “nuisance” alligators being caught in the Gulf of Mexico, along the beach/shoreline in Holly Beach, Rutherford Beach, and Constance Beach in Cameron Parish in southwest Louisiana. These likely accessed the Gulf from adjacent brackish marshes or by traveling to the Gulf by man made ship channels (M. Savoie and E.C. Trahan, licensed Louisiana alligator trappers, pers. comm.). Many are in the 152–183 cm size class, but alligators as large as 274 cm have been caught at these beach sites (E.C. Trahan, pers. comm.).

The barnacles on the oilfield platform (Fig. 2) suggest the alligator shown is in full strength seawater. The alligator appears to have a normal body habitus and does not appear cachectic or anorexic (Fig. 2). Lance et al. (2001) suggested adult alligators can survive for some time in full strength seawater, probably because their thicker skin (relative to hatchling/juvenile alligators) is relatively impermeable. To our knowledge this is the first

Figure 2. Photograph of alligator seen near oil field platform on 4 May 2004. The length of the alligator is unknown, but appears to be a relatively large adult. Photograph © by Mr. Johnny Migues.
report of an alligator occurring so far offshore. Due to increasing concerns about saltwater intrusion and habitat deterioration in coastal Louisiana, similar such observations warrant further study.

Acknowledgments

I thank Anthony Jackson and Johnny Migues for detailed information provided concerning their observation, and Mr. Migues for use of the photograph in Figure 2. I appreciate the assistance of Brandon and Mary Hebert in bringing the photograph to my attention, and Jeb T. Linscombe and Karen S. McCall for preparation of the manuscript.

Literature Cited


