Department of
Environment and Conservation

An Inspection of marine turtle nesting activity, Cape Preston, December 2006.

INTRODUCTION

In 2006, the Department of Environment and Conservation's (DEC) Karratha Office was contacted for current information on marine turtle nesting on Cape Preston. No comprehensive survey of the area had been carried out since 2000 when the then Department of Conservation and Land Management (CALM) inspected the area. The aim of this project was to determine the current extent of turtle nesting on Cape Preston.

Marine turtles that may nest in the Cape Preston area include the Green turtle (*Chelonia mydas*), Flatback Turtle (*Natator depressus*) and either the Hawksbill turtle (*Eretmochelys imbricata*) or the Loggerhead turtle (*Caretta caretta*) (Kendrick 2000). Under Western Australia's *Wildlife Conservation Act 1950* these species are listed as fauna that is 'rare, or is likely to become extinct'. Under the Commonwealth *Environment Protection and Biodiversity (EPBC) Act 1999*, Loggerhead and Hawksbill turtles are listed as 'endangered' and Green and Flatback turtles are listed as 'vulnerable' (Department of Environment and Conservation 2007).

METHODOLOGY

Cape Preston was surveyed for marine turtle nesting activity in 2000, 2004 and 2006. Initial inspection was conducted by a low level helicopter flight on the morning of 28th December 2000. The Cape Preston area was then included in aerial surveys from a fixed wing aircraft on 28th September and 13th December 2004.

A recent inspection was made by a low level helicopter flight on the morning of 27th December 2006, between 0700h and 1030h. Low tide (1.3 metres) occurred at 0904h. Conditions were good for observation of tracks however the previous few days had been windy and tracks were windblown. Observers were Ms. Marissa Speirs (DEC Nature Conservation Officer - Turtle Coordinator), Dr. Peter Kendrick (DEC A/Regional Leader Nature Conservation) and Mr. Geoff Kregor (DEC Senior Ranger Dampier Archipelago Nature Reserve).

The 2006 survey used the same methodology as the flight in 2000. An initial survey of the entire beach of Cape Preston was conducted by helicopter at between 50 and 100 feet altitude, approximately 50 metres seaward of the beach. The location of turtle tracks and nests were plotted on aerial photographs of the area (See Figures 1-4). Following the initial mapping of tracks, two ground inspections were made to determine the species of the tracks. Any sign of hatchlings, predator activity and dead turtles was also noted.

RESULTS

2000 Survey

Most activity on the eastern beach occurred at the eastern end. Nesting activity occurred all along the southern beach and was concentrated at the southern end. Low densities of nesting activity were recorded (22 tracks and 12 older nests). No hatchling activity was observed. At several sites, fox tracks were seen near turtle nests (Kendrick, 2000).

2004 Survey

No turtle tracks were observed on any mainland beaches during aerial surveys conducted between Karratha and Onslow in 2004.

2006 Survey

No marine turtles were observed nesting at Cape Preston. No fresh tracks (from the previous night) were seen along the beaches. A total of 24 older nesting activities (tracks, nests or both) were recorded along the length of both the eastern and southern beaches of Cape Preston. No hatchlings or hatchling tracks were seen.

Eastern Beach

One nest and two sets of tracks were seen on the eastern beach of Cape Preston (see Figure 1 in Appendix and Table 1).

Table 1. Turtle nesting activity on eastern beach, Cape Preston.

Activity Number	Track(s)	Nest	Species
1	None	Yes	Unknown / Flatback?
2	Emerge and Return	Not seen	Flatback?
3	Emerge and Return	Not seen	Flatback?

Southern Beach

Twenty-one nesting activities were recorded on the southern beach of Cape Preston. These included 17 sets of tracks and 11 nests (see Figures 2-4 in Appendix and Table 2).

Table 2. Turtle nesting activity on southern beach, Cape Preston.

Activity Number	Track(s)	Nest	Species
4	One track	Not seen	Unknown / Flatback?
5	Emerge and Return	Not seen	Flatback?
6	Emerge and Return	Not seen	Flatback?
7	Emerge and Return	Not seen	Flatback?
8	Emerge and Return	Yes	Flatback?
9	Emerge and Return	Yes	Flatback?
10	Emerge and Return	Not seen	Unknown / Flatback?
11	Emerge and Return	Yes	Unknown / Flatback?
12	Emerge and Return	Not seen	Flatback?
13	Emerge and Return	Yes	Flatback?
14	Emerge and Return	Not seen	Flatback?
15	Emerge and Return	Yes	Flatback?
16	Emerge and Return	Not seen	Unknown / Flatback?
17	Emerge and Return	Not seen	Unknown / Flatback?
18	Emerge and Return	Yes	Unknown / Flatback?
19	Emerge and Return	Not seen	Unknown / Flatback?
20	Emerge and Return	Yes	Unknown / Flatback?
21	None	Yes	Unknown / Flatback?
22	None	Yes	Unknown / Flatback?
23	None	Yes (dug up)	Flatback?
24	None	Yes	Flatback?

From the air, all tracks appeared to be the same species. A ground inspection of activities 13-15 suggested that all tracks were those of Flatback turtles (see Plate 1). **Confirmed specific identifications were impossible as no turtles were seen nesting and tracks were relatively old and windblown.**

Plate 1: Old track, believed to be that of a Flatback turtle.

Evidence of native predators (goannas, ghost crabs) and introduced predators (foxes) was recorded along a large section of the southern beach. A ground inspection of activity 23 showed that it had been excavated. Fox tracks, scats and diggings were observed near the nest (See Plates 2 and 3).

Plate 2: Fox tracks and a turtle nest (activity 23) dug up by a fox.

Plate 3: Fox scats and egg shells found at activity 23.

The size of the eggshells was consistent with the size of Flatback turtle eggs (which are larger than Green, Hawksbill and Loggerhead turtle eggs).

The carcass of a juvenile Green turtle and the remains of an adult turtle of unknown species were found during a ground inspection of the southern beach.

DISCUSSION

Low densities of marine turtle nesting activity were observed at Cape Preston in 2006. A total of 24 nesting activities were recorded over a 7.5 kilometre stretch of suitable beach. The 2006 turtle nesting season started earlier than previous years. It is possible that tracks created early in the season had been eroded by weather and were not seen during the survey. Therefore, it is likely that turtle activity on Cape Preston could be much higher.

The beaches of Cape Preston are similar to other local mainland Flatback nesting beaches in the Pilbara. From the 2006 survey it appears that one species of marine turtle has nested on Cape Preston this season. All tracks looked the same from the air and those closely inspected were believed to be made by Flatback turtles. Many tracks and nests were eroded or windblown and therefore positive identification was impossible.

RECCOMMENDATION

The beaches of Cape Preston may represent a significant marine turtle nesting resource. As marine turtles that nest in the area are listed as either 'vulnerable' or 'endangered', any nesting beach is a valuable resource that should be conserved and/or managed appropriately.

Further survey of the area should be undertaken to determine the specific species that utilise the beaches. Management of foxes (through a 1080 baiting program) is a priority that should be undertaken as soon as possible.

REFERENCES

Department of Environment and Conservation (2007) DRAFT Plan "The Recovery and Management of Marine Turtles in Western Australia". Department of Environment and Conservation, Karratha, Western Australia.

Kendrick, P. (2000) An Inspection of Sea-turtle nesting activity, Cape Preston, December 2000. File 22.04.1 Department of Conservation and Land Management, Karratha Western Australia.

Kregor, G., Stanley, F. and Lidelow, J. (2005) Aerial survey of beaches between Onslow to Port Hedland for marine turtle nesting 2004. Department of Conservation and Land Management, Karratha, Western Australia.

APPENDIX

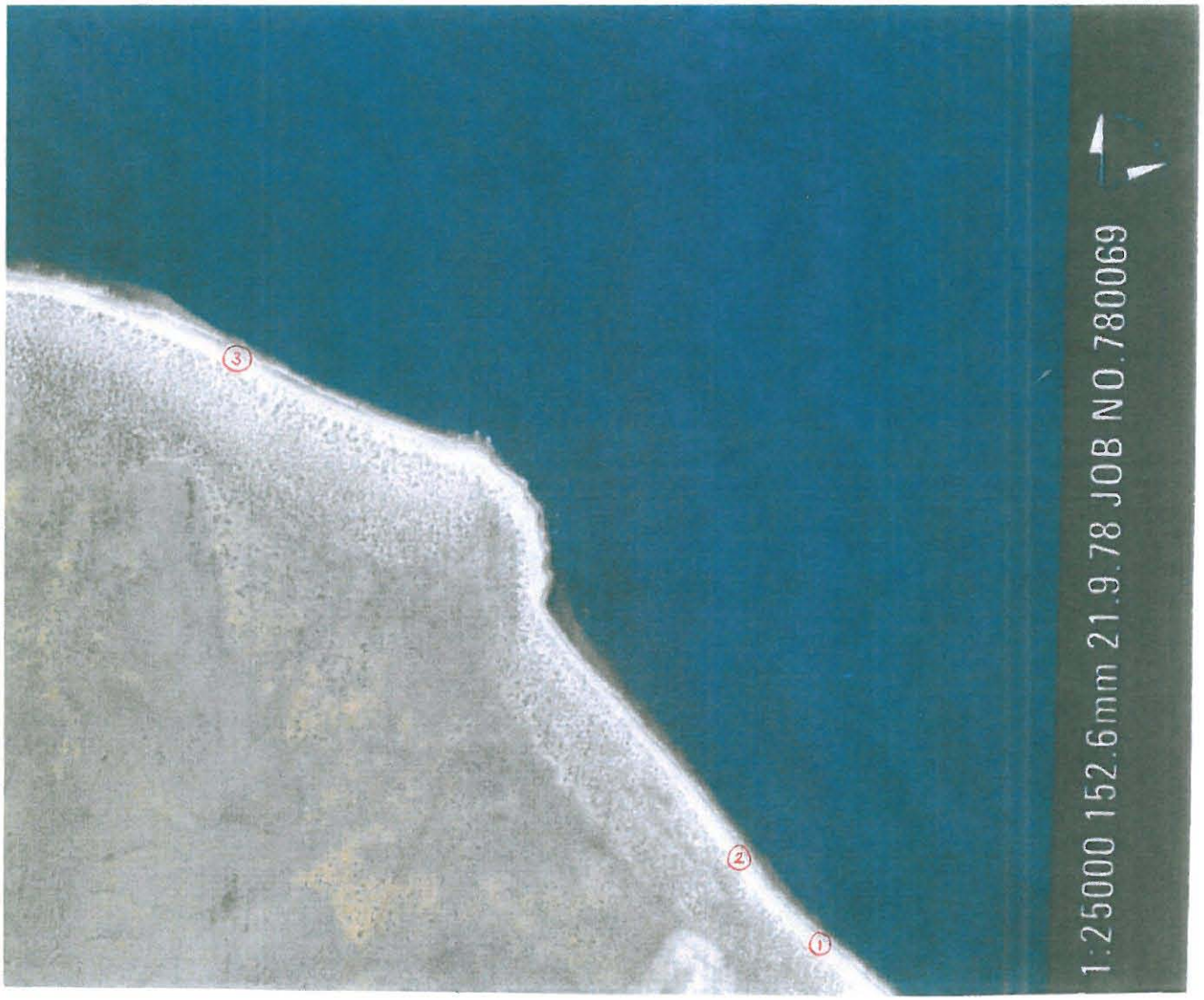

Figure 1: Eastern beach of Cape Preston.

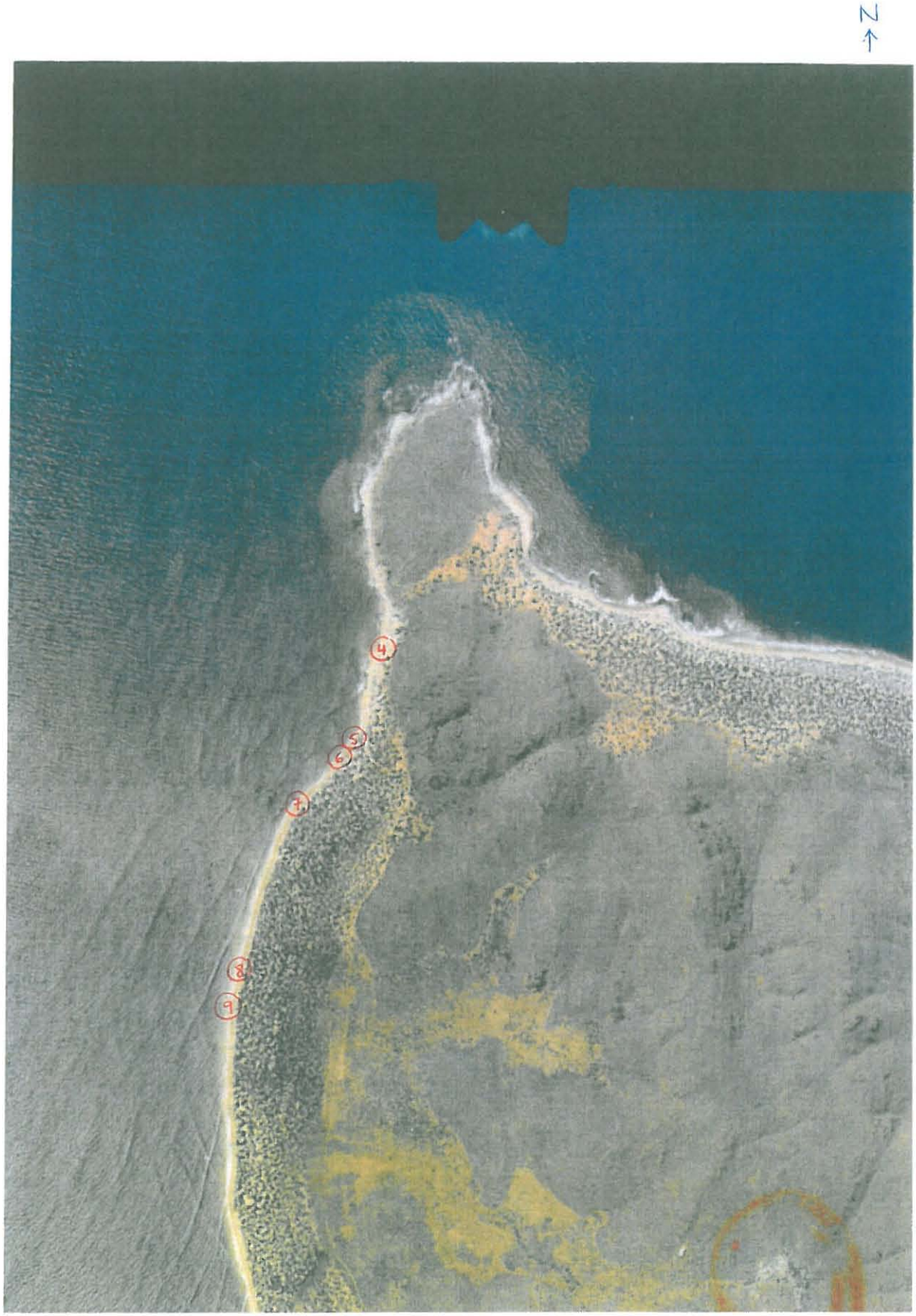

Figure 2: Northern end of southern beach, Cape Preston.

Figure 3: Central area of southern beach, Cape Preston.

Figure 4: Southern end of southern beach, Cape Preston.