

UNIVERSITY OF FLORIDA
GAINESVILLE, 32611

Groombridge, B



DEPARTMENT OF ZOOLOGY
223 BARTRAM HALL
904 392-1107

MEMO

LIBRARY OF
GEORGE H. BALAZS

June 25, 1982

To: IUCN Marine Turtle Specialist Group

From: Archie Carr, Chairman

RE: Draft of IUCN Red Data Book Account of Chelonia mydas

I have just received the enclosed draft of the Red Data Book green turtle account. The compiler, Dr. Brian Groombridge, has indicated that the publication deadline for this is 30 June. This obviously is too soon to allow Group members adequate review time. We here have objected to this and have requested additional time, but can't be sure this will be granted. Meanwhile, I am sending out copies of the draft anyway, and if any of you are inclined to send your comments to Dr. Groombridge*despite this uncertainty, I hope you will do so.

Please note that we have not yet had an opportunity to review the loggerhead account, the deadline for which will presumably also be 30 June.

*Address: Species Conservation Monitoring Unit
IUCN
219(c) Huntingdon Road
Cambridge CB3 0DL
United Kingdom

P.S.: After the above was written the loggerhead account arrived. It is enclosed.

PRELIMINARY DRAFT ONLY - FOR REVIEW JUNE 1982.

'Status' to be finalized.

'References' not proofed.

GREEN TURTLE

VULNERABLE*

Chelonia mydas (Linnaeus 1758)

Order TESTUDINES

Family CHELONIIDAE

*See 'Special Note' following 'Summary'.

SUMMARY (To be completed)

Special Note Although the status category given here is an attempt to state the mean condition shown by all the known Green Turtle colonies, it must be recognized that this attempt at an overall view is less satisfactory for sea turtles than for several other wide-ranging species. This difficulty arises from the well-developed homing ability of sea turtles. Tag returns show this to be especially well-developed in Green Turtles (23,27). Green Turtles mate offshore from the nest beach, and females nest usually on their ancestral nest beach, thus each nesting colony behaves as a separate reproductive unit that can not demographically reinforce any other such unit (23,103). Therefore it is essential that conservation and management programmes focus on maintaining the genetic diversity represented by each significant colony (23,102). Recent studies using starch gel electrophoresis of tissue proteins in C. mydas (102) have revealed unusually high levels of heterozygosity at the 13 loci examined, and this technique may provide a suitable means of assessing genetic variability.

The 'species' Chelonia mydas (and to a perhaps lesser extent the four other circumglobal sea turtles) should not be regarded as a single potentially interbreeding assemblage, but a complex of discrete populations, largely or entirely genetically-isolated from each other. Some geographic groups of the C. mydas complex may be more appropriately considered as separate full species. For example, the population nesting in the Galapagos and east Pacific (C.m.agassizii) is sometimes regarded as a full species, the Black or East Pacific Turtle C. agassizii. This nomenclatural change may well be effective in conservation terms, since one particular population group can thereby be singled out as a target species. However, a conservative position is taken here simply because no adequate overall examination of the systematics of the Green Turtle complex has yet been undertaken. A recent study of geographical variation in the amino acid composition of shell keratins (101) has shown, for example, that the Gulf of California form (sometimes referred to as C.m.carrinegra), not agassizii, is by far the most distinctive of the eight samples investigated.

It would theoretically be possible to assign each discrete population a separate IUCN status category, indeed this would be the logical and desirable course if the argument is accepted that there is little or no genetic interchange between each population. However, sufficient data are not available by which to characterize every population. The single status category given here is thus very much a compromise. It should be recognized that populations vary strongly in their survival status. Several, such as the Pacific Mexico colony, or many of those in the Caribbean, are "Endangered"; others are "Vulnerable"; while others, such as

deleted
in
final

UNTRV - see m file letter
the Australian or Hawaiian colonies may not be seriously threatened at all.

DISTRIBUTION A pantropical species occurring in waters remaining above 20°C in the coldest month. Wandering individuals have been recorded as far north as the English Channel 52°N, and as far south as Polla Island, Chile (55).

On the west coast of North America Green Turtles have been reported from British Columbia to Baja California (3). Uncommon off the California coast (3,55). In Pacific Mexico, nesting takes place from Chiapas to Jalisco, concentrated in Michoan (94) especially on the beaches of Colola and Maruata (84) and on the Les Tres Marias and islands in the Golfo de Tehuantepec (94). Small scale nesting also takes place on the Islas Revillagigedo, Isla Socorro, Isla Clarion and Ile Clipperton (94). Little is known about Guatemalan turtle populations, but some nesting may occur in the south-west near Ocos and on barrier beaches near the Chiquimulilla Canal (33). Dispersed nesting occurs on all sandy beaches on the El Salvador coast (33) and some nesting occurs on the Pacific coast of Honduras and Nicaragua (33) and Costa Rica (94). There is very little nesting on the Pacific coast of Panama, although Green Turtles have been observed in coastal waters (33). Very little information is available for Colombia although Green Turtles have been reported there (48). In the Galapagos Green Turtles occur in large numbers and are the most common marine turtle. Nesting occurs on most islands. There are important feeding grounds near the western islands of Isabela and Fernandina (48). In Ecuador Green Turtles probably occur in small numbers along the entire coast and certainly from the Peruvian border as far north as Rocafuerte. Nesting occurs along most of the coast from Costa Rica Island to just north of Alacames, but is more common between Monta and Cojimies (48). Found along the entire Peruvian coastline with fairly regular feeding concentrations occurring at Bocapan, Punta Mero, Punta Sal, Restin, Casitas, Parachique, the Islands of Lesbos de Tierra and Lesbos de Afuera, Pisco and Lagunillas. Some nesting occurs in the north of the Department of Tumbes. At least some of the large number of feeding turtles may have migrated from the Galapagos Islands (50).

In the Atlantic the Green Turtle occurs in Uruguayan waters but is not known to nest (49). Nesting is reported in Brazil from Para to Sergipe especially on Atol des Rocas (94). Nesting on an unknown scale occurs on the western beaches of French Guyana especially at Les Hattes/Point Isere (94). The beaches of Surinam are subject to continuous erosion and alteration with resultant movement of nesting sites. The Marowijne mouth beaches, Eilanti beach, Dap Eiland beach, Tijgerbank (Baboensanti and Pruimenboom) and Galibi beach are probably the most important nesting areas in Surinam. The Surinam population appears to feed off the Brazilian coast; particularly off the states of Maranhao, Piaui, Ceara, Rio Grande de Norte, Paraiba, Pernambuco and Alagoas (91). Green turtle nesting is reported to occur in Guyana on Shell, Papaya, Turtle, Laguan, Tiger Island, Suddie, Zeelandia, Mahaica-Mahaicong and Corentyne beaches, and Essequibo (94). Nesting also occurs on the northwest coast from the mouth of the Moruca River to Waini Point, but this area may be threatened by mineral extraction (34).

Nesting on the mainland Venezuelan coast appears meagre, but further surveys are needed (22). Minor nesting sites are known at Cumana, Margarita, La Tortuga, Los Rocques and other islands (94). The second most important nesting site in the Caribbean is on Aves Island, Venezuela (22). Small scale nesting occurs on the northern and eastern coasts of Trinidad and Tobago (22). There are foraging grounds in the Gulf of Paria (22). Nesting occurs infrequently on the Caribbean coast of Colombia between Cartagena and Santa Marta and occasionally among the Islas del Rosarios (22). In Caribbean Panama Green Turtles occasionally nest on Changuinola, Bastimentos and Chirqui beach (22)