

By BALAZS
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SUMMARY OF INFORMATION ON MARINE TURTLES IN THE PHOENIX AND LINE ISLANDS

Phoenix Islands

Little definitive data is available on marine turtle populations found in the Phoenix Islands. This dearth of knowledge has been brought about by the islands' relative inaccessibility and unsuitability for human habitation. Oceanic islands of this nature are some of the few remaining locations left in the world where turtle populations are apparently not experiencing serious declines from exploitative pressures and nesting habitat destruction of man.

The fact that marine turtles utilize sand beaches in the Phoenix Islands and occur in adjacent water had, until recently, only been casually noted in the literature. Wilkes (1845) recorded that one Frenchman and eleven Tahitians were found catching turtles on Hull Island in August of 1840. Bryan (1942), Walker (1955) and Degener and Gillospy (1955) each briefly noted that turtles could be found on Canton Island. In addition Bryan (1942) speculated that turtles occasionally came out on sand beaches at Phoenix Island since a skull and bones were found during a visit in 1924. The British Pacific Islands Pilot (1946) noted that Gardner, Hull and Sydney hosted turtles, while the United States Sailing Directions for the Pacific Islands (1952) listed turtles on Enderbury in addition to these three islands.

The only available scientific data on species present, seasonality of nesting, beach utilization and relative abundance was recently compiled during reconnaissance surveys of Canton Island (Balazs, in press). Although intensive and comprehensive

investigations need to be conducted for extended periods, preliminary findings indicate that four specific sand beaches are utilized for nesting purposes on Canton Island (Figure 1). The green (Chelonia sp.) is the turtle of greatest abundance, however, other species are very likely present. Nesting has been documented to occur to some extent throughout the entire year, however, the presence of larger numbers during October and November indicates that a seasonal cycle may also be present. Preliminary surveys also suggest that a total of 150 or more females may be involved in seasonal nesting alone. Other than several animals that were marked during a recent visit by Balazs, no tagging work has been conducted on turtles in this area of the Pacific. No basis therefore exists to ascertain or speculate on long distance migration patterns or more localized movements. Turtles are also seen throughout the year both inside Canton's lagoon and immediately outside the one major pass. Most animals are large adults (> 90 cm carapace length), however, some smaller juveniles (<60 cm) are occasionally seen.

A summary of recently gathered marine turtle information on islands in the Phoenix group other than Canton is listed as follows:

1. Enderbury - relatively heavy nesting along the eastern and western shoreline during October and November, although some nesting takes place throughout the year;
2. Hull - nesting turtles present along the western and southern coast throughout the year;
3. Sydney - tracks of turtles sighted during February along the northwest coast;
4. Gardner - tracks of turtles sighted during February on the southern coast;

5. Bernie - tracks of turtles sighted occasionally throughout the year;

6. Phoenix and McKean - no recent information available.

It should be emphasized that knowledge to date on islands other than Canton is undoubtedly biased to those few locations frequented by persons stationed in the Phoenix Islands during the course of their duties.

Line Islands

Information on marine turtle populations in the Line Islands is also greatly lacking due to the absence of surveys directed at ascertaining the status of these animals. Early reports indicate that turtles were abundant at Christmas Island at the time of Cook's discovery in December of 1777 (Buck, 1953). Tresilian in 1838 stated that numerous green turtles averaging 50 to 300 lbs. in weight could be found at Christmas Island. As reproductive size for this species averages 200 lbs., the assumption must be made that reference was being made, at least in part, to animals present in offshore waters and not females that had emerged for nesting purposes. Indication has recently been given (personal communications) that some egg deposition still occurs on Christmas, however, native inhabitants have probably greatly exploited the bulk of any remaining nesting population.

Burnett (1910) noted that turtles were plentiful on Fanning 50 years ago. Although no recent mention has been made, it seems highly likely that residents at this location have utilized any nesting animals to the fullest capacity. The same may also be true

for Washington Island.

The current status of marine turtles at Palmyra and Kingman Reef is completely unknown. Sightings of aggregations of green turtles were made in shallow water off the eastern end of Palmyra between 1958 and 1965 by Helfrich (personal communication).

No information is available on migration patterns and seasonality of turtle nesting for any of the Line Islands.

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