picture of the life cycle of this bird, based on long-term studies so that they can calculate the optimum number of chicks to take in each seasons' harvest. The loss of scabirds, like the turtles would be more serious than just the loss of a food resource. The birds are not only scientific objects, they are more, because they also have a roll in atoll marine ecology. If tourism, as in Fiji, becomes an important source of income, this requires substantial bird populations. Scabirds are just as integral a part of the mystique of coral islands as palm trees and non-polluted clear water. If you build a hotel on Christmas Island for game fishing as is being discussed, the tourists will not be attracted by the incomplete atoll scenery without birds. Wise conservation action is therefore meeded now to ensure the future. What could happen is demonstrated on Tarawa, Sydney and Gardener where the scabirds have not been able to recover at all.

Steps should be taken to conserve the birds first before it is too late. We think it is advisable that Government takes steps towards legislation affecting wildlife. So far I haven't net a Gilbert or Ellico Islander who has any idea of conservation or resource management and the best hope of persuading them that rational, as opposed to total exploitation, is in their own interests by education in the schools. From my own point of view only those conservations actions which are based on a change of awareness by education towards an understanding of their own n-tive animals will be rich in meaning. What happened to Christmas Island is quite a good example. It has already been declared a bird sanctuary in 1960 curing the occupation time of the services. But there has been no education towards an understanding of protective legislation. Even purmission to visit the islands has sunk into oblivion and I suppose none folt responsible to introduce the newconers to the local protection rules.

## Succestions: (Bird Protection)

To enforce the conservative legislation on Christnes
Island nore effectively it is necessary to employ a
Conservation Officer, with police power, with one or two helpers.
Furthernore it would very profitable to have an emithologist
permanently on the island to carry out some long-term population
studies. Cook Island, Motu Upua, and Motu Tabu should only
be visited with a special permit. The unhabited, isolated,
conomically unimportant Vestek Island should be
declared as a nature reserve as soon as possible because of the
great scabird population there. At some stage in the past
Phoenix Island, Birnie and McKean Islands, were declared
as bird sanctuaries, but I feel that to ensure their further
freedom from habitation, dogs, cats and rats, that further
legislation should be made to keep these islands as nature
reserves.

## Our octions: (Turtle Protection)

On Flint there seemed to be the only good green turtle nesting place in the visited islands. Six large females had been caught in one week by four Tahitian copra cutters. I suppose not only to supplement their diet but also to sell the shells on Tahiti which is quite lucrative today.

During our brief visits we found out scrething about the status of sea turtles there. We found, as had been feared by Marine Turtle Specialists that on the Line Islands as well the turtles were reduced to very low numbers. Turtle nesting is now a very rare occurance. Quite a number of people who we contacted informed us that the turtle population is fairly large, although no information was available on the current stitus of turtle stocks in the line Islands. Turtles were killed, not only on Flint which is not permanently inhabited, but also on the northern line Islands nearly every turtle coming up to lay is killed by the local people as fast as they come ashore. Turtle meat has long been a delicacy among Gilbertese and Ellice Islanders. Because of over-killing then in nearly the whole of the central Pacific, it is only in outlying areas that they really survive. Thus, little nesting new takes place, and the remnants of the breeding population are still being killed and their oggs taken. Undoubtably this situation has existed for hundreds of years on the Gilbert and Ellice Islands, but the increase in population, combined with greater boating mobility has allowed a higher prodation on nesting grounds that wore previously visited only rarely.

#### West should be done?

We think that two things should be done at the same time. Firstly important turtle nesting areas (e.g. Flint Island) should be declared strict turtle sanctuaries at all times of the year, or the present legislation should be modified in this line. Protective legislation under the fisheries act would be excellent. But even this alone would not be sufficient, at the same time the local population must be persuaded by education that a total exploitation by overkilling cannot be rationa. The loss of tu rtles would be much more important than the loss of a food resource. Sea turtles are just as integral part of the reef ecology and environment, as algae and corals. Like every animal they have a special function in the Marine ecology. I hope that a teaching in this way will increase awareness of, and interest in, the fauna. Steps should be taken to conserve them first before it is too late. It is a pity that there has been no Marine Turtle Specialist participating inthis "expedition" assessing the populations. We are sure that a request from the Government of G.E.I. C. to the Australian or U.S. Government for a Marine Turtle Specialist, to advise them on resource nanagement and help you to combine protective activities with a controlled exploitation, such as turtle farming, would result in help being provided. It would be worthwhile as well, to contact the Regiona, Ecological Adviser,

> Mr Arthur L. Dahl, S.P. Commission, B.P. D-5 Noumea Codex, New Calodonia.

Dr. Henning Grossmann, 2 Henburg 67 Nollenbergweg 3, West Gerneny.



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# Line Islands Expedition

AUGUST-OCTOBER 1974

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