

Spiny Lobster Resources

By

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INTRODUCTION

Investigations into the resources of spiny lobsters in Ceylon waters were first begun in 1958 and consisted initially of skin-diving surveys of sand-stone and rocky areas at night. The surveys revealed the presence of lobsters in appreciable quantities in these reefs. Experiments were then carried out to decide on the most effective method of capturing them. Lobster traps of different design were placed in the reefs and rocky areas and the most efficient design was selected for use. This design was used thereafter to assess the spiny lobster resources. However, traps proved ineffective on the east coast as the particular species present there did not enter traps. Where traps failed the resources were assessed using skin-divers. These operations revealed the presence of lobsters in large concentrations in particular areas around Ceylon, especially on the south-west, south and west coasts. (De Bruin, 1960 and 1962). This discontinuity in distribution is discussed in greater detail in a previous publication. (De Bruin, 1969).

One of the most productive areas discovered during these surveys was the sand-stone reef lying at depths of one foot to six fathoms between the Galle Buck Light House and Mount Lavinia Hotel. Since this resource was discovered in 1958, the ground has been intensively fished by skin-divers. They have found lobster-fishing at night a very lucrative business as lobsters, both alive and in the frozen state, find a very ready market in France and the U.S.A. This publication describes the resources of lobsters in the reef lying between Galle Buck and Mount Lavinia. This reef is probably the richest in resources of lobsters in Ceylon waters.

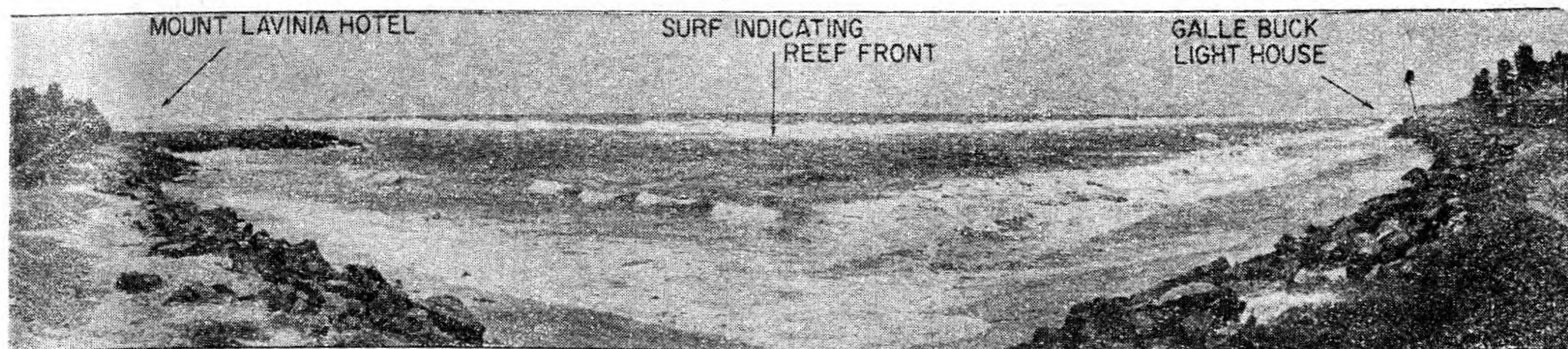


Fig. 1.—A panoramic view of the Lobster Fishing Gronds lying between Galle Buck Light-House and Mount Lavinia Hotel—perhaps the richest in lobsters in Ceylon Waters.

Lobster Resources in the Reefs Lying between Galle Buck Light House and Mount Lavinia Hotel

Divers and trap-fishermen carried out experimental fishing operations on the reefs lying between Galle Buck and the Mount Lavinia Hotel from 1958 to 1960 to ascertain the effect of continuous intensive exploitation for a period of two years. The experiments showed that a restricted area of

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52,000 sq. ft. fished for six months of the year and seven days of each month, yielded a total of 8,000 lobsters. Further, there was no reduction noticeable in the mean carapace length of either sex. This indicated that this particular intensity of fishing in such a restricted area had little effect on the population of spiny lobsters present. (De Bruin, 1962).

The number of skin-divers exploiting this reef has increased from four in 1960 to twenty-four in 1969. Although certain areas of the reef lying between Galle Buck and Mount Lavinia are now devoid of lobsters the average catch of a skin-diver in a day's fishing remained constant. Table 1 shows the catches made in this area over a period of ten years.

Table I—Lobster catches off the Reefs lying between Galle Buck Light House and Mount Lavinia

<i>Year</i>	<i>Total catch of Lobsters</i>	<i>No. of Skin-Divers</i>	<i>Average Catch per skin-Diver per day</i>
1960	4,000	4	25
1961	4,400	4	26
1962	6,000	6	27
1963	8,500	8	32
1964	12,000	12	28
1965	14,000	15	28
1966	16,000	20	26
1967	15,000	22	23
1968	18,000	22	27
1969	25,000	24	24

It was observed during this ten-year survey that certain areas of the reef between Galle Buck and Mount Lavinia were devoid of lobsters at the end of each successive lobster fishing season. The fishing season begins in August and ends in April. However, at the start of the following season these same areas were found to be repopulated with lobsters of a similar mean carapace length as at the beginning of the preceding season. This suggests migration of lobsters from another region as those remaining at the end of each fishing season were very small. It is likely that the migration takes place from the parallel reef lying farther off-shore at depths of eight to ten fathoms. This second reef is now unfished and appears to provide a reservoir of lobsters for the shallower reef lying closer to the shore.

REFERENCES

- DE BRUIN, G. H. P. 1960—Lobster fishing in Ceylon. *Bull. Fish. Res. Stat. Ceylon*. 2 : pp. 1-18.
- DE BRUIN, G. H. P. 1962—Spiny Lobsters of Ceylon. *Bull. Fish. Res. Stat. Ceylon*. 14 : pp. 1-28.
- DE BRUIN, G. H. P. 1969—The Ecology of Spiny Lobsters, *Panulirus* spp. of Ceylon waters. *Bull. Fish. Res. Stat. Ceylon* 20 (2) : pp. 171-190.