

## COMPOSITION OF THE CORAL FAUNA OF THE SOUTHEASTERN COAST OF INDIA AND THE LACCADIVES\*

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### SYNOPSIS

Coral reefs of fringing nature are found both in the Gulf of Mannar and Palk Bay on the southeastern coast of India. In the Gulf of Mannar, they are scattered mostly around the various islands lying between Tuticorin and Rameswaram. The reefs of Palk Bay are confined to the northern and eastern coasts of Rameswaram Island and the northern side of Mandapam. Investigations on the corals of this area, between Long. 79°4'E and 79°15'E and Lat. 9°10'N and 9°18'N, have revealed the occurrence of 117 species divided among 33 genera. Of these, 110 species of 26 genera are hermatypic and the rest ahermatypic. The most conspicuous components of the coral fauna of this area are the members of the families Acroporidae, Poritidae and Faviidae. It is feared that the coral reefs of southeast India are fast deteriorating due to natural as well as artificial causes some of which are also discussed in this paper.

The scleractinia of the Laccadive Archipelago are still poorly known except for some information from Minicoy and Chetland Island. To the present a total of 69 species belonging to 26 genera are known from the archipelago, all of which are known to occur at Minicoy Atoll. A comparison of the coral faunas of southeastern India and the Laccadives is also presented.

### INTRODUCTION

Coral reef formations along the coasts of peninsular India are restricted to the Gulf of Kutch on the northwestern coast and to Palk Bay and the Gulf of Mannar on the southeastern coast, where fringing or patch reefs are found. The coral formations of the southeastern coast of India extend further south, fringing the coasts of Ceylon. The major part of the Bay of Bengal and the Arabian Sea along the subcontinental coasts are devoid of reefs, which might result from the large quantity of freshwater and silt brought by the great rivers (Sewell, 1932). Further, the presence of a very high percentage of nitric acid (about 2.52 tons per square mile) in the Ganges waters, especially during the monsoon, is detrimental to any large scale reef formation at the northern sector of the Bay of Bengal (Sewell, 1935). Early references to the corals and coral reefs of the southeast coast of India are found in Thurston (1895), Foote (1888), Brook (1893), Bernard (1897, 1905), Matthai (1924, 1928), Gravely (1927) and Sewell (1932, 1935). Gardiner

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has paid much attention during the beginning of this century to the corals and reefs of Minicoy Atoll in the Laccadives. There appears to be no work on the Scleractinia of the Gulf of Kutch.

Systematic and ecological investigations on the stony corals of the seas around India, mostly from Palk Bay and the Gulf of Mannar, have been carried out by the present author since 1964. Some of the results of these investigations have already been published (Pillai, 1969a, b, c). The present account is an attempt to give in brief the results so far obtained. The discussion on the Laccadive fauna is mostly confined to Minicoy, due to lack of detailed informations from other parts of the archipelago.

#### THE SOUTHEAST INDIAN REEFS, THEIR EXTENT AND LOCATIONS

Descriptions of a general nature of the reefs of this area are given by Foote (1888) and Thurston (1895). Sewell (1935) has paid much attention to the raised reefs of this area during his geographic and oceanographic research in Indian waters. The reefs of this area are fringing or patchy types, thriving in very shallow waters either near the shores of the mainland or encircling a few islands. Most of the reef framework is composed of dead and semifossilized *Porites*. The calcareous algae appear to play very insignificant roles in building reefs in this part of the Indian Ocean. The shallow waters with muddy or sandy surroundings considerably restrict the growth of corals and at present the reefs seem to be in a state of deterioration.

#### *The reefs of the Gulf of Mannar*

The coral reefs of the Gulf of Mannar along the Indian coast are found scattered around a large number of islands situated between Long. 79°9'E and 79°29'E and Lat. 8°45' and 9°16'N. Rajendran and David (in press) have recently made a preliminary underwater survey on the extent of these reefs. The present author's investigations on the corals of the Gulf of Mannar are mostly confined to a few islands in the vicinity of the Central Marine Fisheries Research Institute, Mandapam Camp (Fig. 1). Shingle Island is at the eastern extremity of the chain of islands and is very close to Krusadai Island and all are surrounded by patchy coral growths. The southern, southeastern and eastern sides of Krusadai Island have well developed fringing reefs with a boulder zone. The lagoon of Krusadai becomes very shallow during low tides and has a rich assemblage of different types of corals. The Krusadai reef is mostly dead. The adjacent Pulli Island, Pullivasal Island, New Islet, Manauli Island and Hare Island all have fringing

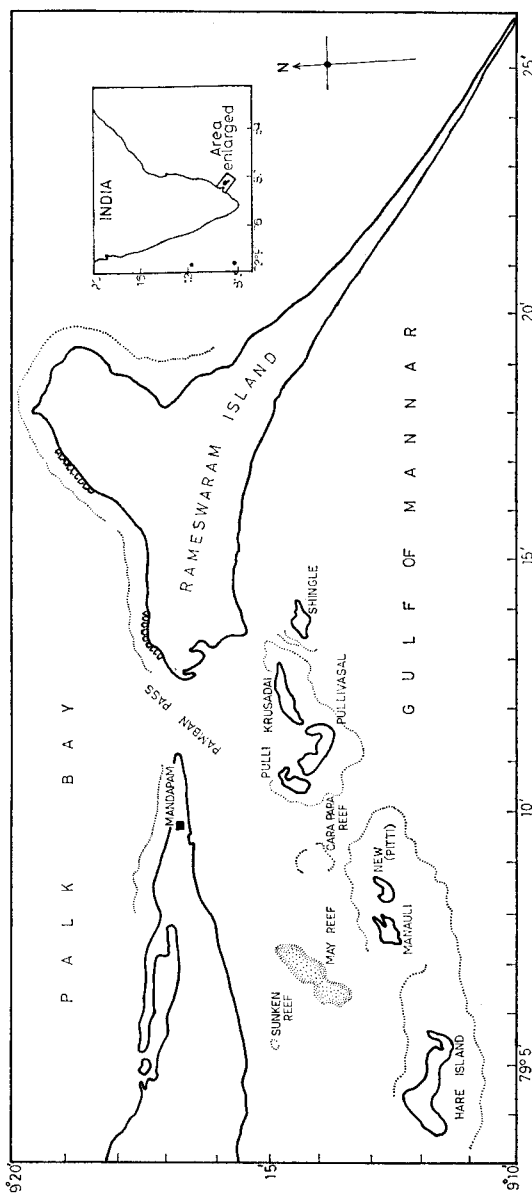


Fig. 1. Region of investigations on the corals of the Gulf of Mannar.

reefs with shallow sandy lagoons. The reefs are located 100–150 m from the shore. In listing the fauna, because of the faunal similarities and proximity, Krusadai and Shingle are considered together. The fauna of Pulli and Pullivasal are listed together while those of New Islet and Manauli are considered together. Hare Island is treated separately.

#### *The reefs of Palk Bay*

Running parallel to the mainland in an eastwest direction and located 300–600 m away from the shore in some places, there is a reef in Palk Bay at Mandapam. It extends between Long. 79°8' and 79°12'E at a Lat. of 9°17'N. The reef is broken at Pamban Pass but continues along the northern and eastern side of Rameswaram Island. The lagoon is 1–2 m deep at low tides with a mostly sandy floor and generally devoid of any coral. The absence of corals can be due to the fact that there is hardly any hard substratum on which coral planulae can settle. A Boulder Zone is absent which might be due to the shallowness of the Bay and very little wave action during most of the months coupled with a poor growth of corals. Details of the structure and distribution of corals on this reef are presented elsewhere (Pillai, in press, a).

#### PHYSICAL AND HYDROBIOLOGICAL CONDITIONS OF THE AREA

The Gulf of Mannar and Palk Bay at Mandapam are separated only by a narrow strip of land having permanent connection through the Pamban Pass between Mandapam and Rameswaram Island. Palk Bay is a rather shallow basin with mostly muddy inshore regions, while the Gulf of Mannar is more open, deep and with rocky patches in the inshore regions (Jayaraman, 1954). The waters of the two mix freely at the Pamban Pass and at Adam's Bridge between Dhanushkodi and Ceylon. Both northeast and southwest monsoons prevail in this area, though the former contributes towards the major portion of the annual rainfall during which heavy winds are of common occurrence. The mean annual rainfall varies from 762–1270 mm (Tampi, 1959). No freshwater stream flows to this area. The average monthly atmospheric temperature ranges from 25° to 31°C with the maxima and minima in May and January respectively. The average temperature of the surface water varies from 25° to 30°C in different months, that of Gulf of Mannar being of a slightly higher order than that of Palk Bay (Prasad, 1957). A regular seasonal cycle in the salinities of the surface waters of this area has been observed by Prasad (1954). The salinity is low in the month of January and then gradually rises to remain high till November followed by a decline in December. In most of the months the salinity

is between 33 and 36‰ with a fall between 25–27·47‰ in the month of January.

THE STRUCTURE OF THE CORAL FAUNA OF THE SOUTHEAST COAST  
OF INDIA

The various localities around Mandapam from which a fairly intensive collection of corals was made are considered here as a single faunal district. The details of the occurrence of the different species at different localities are shown in Table I. An analysis of the genera of corals hitherto recorded from this place is presented below. The number of species recorded under each genus is presented in Table III. Genera are listed in alphabetical order.

TABLE I

*Check-list of Scleractinia from southeast India.  
The classification adopted is that of Wells, 1956*

No.	Name of species	Manda- pam (Palk Bay)	Krusa- dai Island and Shingle Island	Pulli- vasal and Pulli Islands	Manauli Island and New Islet	Hare Island
		1	2	3	4	5
	Order Scleractinia					
	Suborder Astrocoeniina					
	Family Thamnasteriidae					
1.	<i>Psammocora contigua</i> (Esper)	—	×	×	—	—
	Family Pocilloporidae					
2.	<i>Pocillopora damicornis</i> (Linnaeus)	×	×	×	×	×
3.	<i>P. danae</i> Verrill	—	—	—	×	—
	Family Acroporidae					
4.	<i>Acropora cervicornis</i> (Lamarck)	—	×	—	—	—
5.	<i>A. ceylonica</i> (Ortmann)	—	—	—	×	—
6.	<i>A. corymbosa</i> (Lamarck)	×	—	×	×	×
7.	<i>A. digitifera</i> (Dana)	×	—	—	—	—
8.	<i>A. diversa</i> (Dana)	—	×	—	—	—
9.	<i>A. erythraeae</i> (Klunzinger)	—	×	×	×	×
10.	<i>A. exigua</i> (Dana)	×	—	—	—	—
11.	<i>A. formosa</i> (Dana)	×	×	×	×	×
12.	<i>A. haimeii</i> (Milne-Edwards and Haime)	×	—	—	—	—

TABLE I (continued)

No.	Name of species	Manda- pam (Palk Bay)	Krusa- dai Island and Shingle Island	Pulli- vasal and Pulli Islands	Manauli Island and New Islet	Hare Island
		1	2	3	4	5
13.	<i>A. humilis</i> (Dana)	×	×	×	×	×
14.	<i>A. hyacinthus</i> (Dana)	×	—	—	—	—
15.	<i>A. indica</i> (Brook)	×	×	×	×	×
16.	<i>A. intermedia</i> (Brook)	×	—	—	—	—
17.	<i>A. multicaulis</i> (Brook)	—	—	×	×	—
18.	<i>A. multiformis</i> (Ortmann)	—	—	—	×	—
19.	<i>A. nobilis</i> (Dana)	—	—	—	×	×
20.	<i>A. pharaonis</i> (Milne-Edwards and Haime)	×	—	—	—	—
21.	<i>A. polymorpha</i> (Brook)	×	—	—	—	—
22.	<i>A. obscura</i> (Brook)	×	—	—	—	—
23.	<i>A. spicifera</i> (Dana)	—	×	—	—	—
24.	<i>A. squamosa</i> (Brook)	×	—	—	—	—
25.	<i>A. surculosa</i> (Dana)	—	—	×	×	×
26.	<i>A. thurstoni</i> (Brook)	×	—	—	—	—
27.	<i>A. valida</i> (Dana)	—	—	—	—	×
28.	<i>Montipora composita</i> Crossland	×	—	—	—	—
29.	<i>M. digitata</i> (Dana)	×	×	×	×	×
30.	<i>M. divaricata</i> (Brüggemann)	×	×	×	×	×
31.	<i>M. edwardsi</i> (Bornard)	×	—	—	—	—
32.	<i>M. elscheneri</i> (Vaughan)	—	—	—	×	—
33.	<i>M. explanata</i> (Brüggemann)	×	×	—	—	—
34.	<i>M. exserta</i> (Quelch)	×	—	—	—	—
35.	<i>M. foliosa</i> (Pallas)	×	×	×	×	×
36.	<i>M. granulosa</i> (Bernard)	—	—	—	×	—
37.	<i>M. informis</i> (Bernard)	×	×	×	×	×
38.	<i>M. manauliensis</i> Pillai	—	—	—	×	—
39.	<i>M. monasteriata</i> (Forskål)	×	—	—	—	—
40.	<i>M. spongiosa</i> (Ehrenberg)	—	×	—	—	—
41.	<i>M. spumosa</i> (Lamarck)	×	—	—	×	—
42.	<i>M. subtilis</i> (Bernard)	—	—	—	×	—
43.	<i>M. tuberculata</i> (Lamarck)	—	—	—	×	—
44.	<i>M. turgescens</i> (Bernard)	—	—	—	×	—
45.	<i>M. venosa</i> (Ehrenberg)	—	×	—	—	—
46.	<i>M. verrilli</i> (Vaughan)	×	×	×	×	×
47.	<i>M. verrucosa</i> (Lamarck)	—	—	—	×	—
48.	<i>Astreopora myriophthalma</i> (Lamarck)			Gulf of Mannar		

TABLE I (continued)

Suborder Fungiina					
Superfamily Agariciidae					
Family Agariciidae					
49. <i>Pavona decussata</i> (Dana)	—	—	—	×	—
50. <i>P. divaricata</i> (Lamarck)	—	×	—	—	—
51. <i>P. maldivensis</i> (Gardiner)	—	×	—	×	—
52. <i>P. varians</i> (Verrill)	×	×	—	—	—
53. <i>Pachyseris rugosa</i> (Lamarck)	—	—	—	×	—
Family Siderastreidae					
54. <i>Siderastrea radians</i> (Pallas)	×	—	×	—	—
55. <i>S. savignyana</i> (Milne-Edwards and Haime)	×	—	×	—	—
56. <i>Oscinaraea monile</i> (Forskål)	×	×	—	×	×
Superfamily Poriticae					
Family Poritidae					
57. <i>Goniopora djiboutiensis</i> (Vaughan)	—	—	—	×	—
58. <i>G. duofaciata</i> (Thiel)	×	×	×	×	×
59. <i>G. lobata</i> ?	Gulf of Mannar				
60. <i>G. nigra</i> (Pillai)	×	—	×	×	×
61. <i>G. stokesi</i> (Milne-Edwards and Haime)	×	—	—	—	—
62. <i>Porites alveolata</i> (Milne-Edwards and Haime)	—	—	—	—	—
63. <i>P. compressa</i> (Dana)	×	×	—	—	—
64. <i>P. exserta</i> Pillai	—	—	—	×	—
65. <i>P. fragosa</i> (Dana)	—	—	—	×	—
66. <i>P. lichen</i> (Dana)	×	×	×	×	×
67. <i>P. lutea</i> (Milne-Edwards and Haime)	×	—	—	×	—
68. <i>P. mannarensis</i> (Pillai)	—	—	×	×	×
69. <i>P. nodifera</i> (Klunzinger)	×	—	—	—	—
70. <i>P. solida</i> (Forskål)	×	×	×	×	×
71. <i>P. somaliensis</i> (Gravier)	×	×	×	×	×
72. <i>P. thurstoni</i> Pillai	—	—	—	×	—
73. <i>Porites</i> sp.	—	—	—	×	—
74. <i>P. (Synaraea) convexa</i> (Verrill)	—	—	—	×	—
Suborder Faviina					
Superfamily Faviidae					
Family Faviidae					
Subfamily Faviinae					
75. <i>Plesiastrea versipora</i> (Lamarck)	×	—	—	—	—
76. <i>Favia fava</i> (Forskål)	×	—	—	—	—
77. <i>F. pallida</i> (Dana)	×	×	×	×	×
78. <i>F. speciosa</i> (Dana)	—	×	—	×	—
79. <i>F. stelligera</i> (Dana)	—	—	—	×	—
80. <i>F. valenciennesi</i> (Milne-Edwards and Haime)	×	×	×	×	×

TABLE I (continued)

No.	Name of species	Manda- pam (Palk Bay)	Krusa- dai Island and Shingle Island	Pulli- vasal and Pulli Islands	Manauli Island and New Islet	Hare Island
		1	2	3	4	5
81.	<i>Favites abdita</i> (Ellis and Solander)	×	×	×	×	×
82.	<i>F. halicora</i> (Ehrenberg)	×	—	—	—	—
83.	<i>F. melicerum</i> (Ehrenberg)		Mandapam (Gulf of Mannar)			
84.	<i>F. pentagona</i> (Esper)	—	—	—	×	—
85.	<i>F. virens</i> (Dana)	×	—	—	—	—
86.	<i>Goniastrea incrustans</i> Duncan	—	—	—	×	—
87.	<i>G. pectinata</i> (Ehrenberg)	×	×	×	×	×
88.	<i>G. retiformis</i> (Lamarck)	×	×	×	×	×
89.	<i>Platygyra lamellina</i> (Ehrenberg)	×	×	×	×	×
90.	<i>Leptoria phrygia</i> (Ellis and Solander)	—	×	—	—	—
91.	<i>Hydnophora exesa</i> (Pallas)	×	×	—	—	—
92.	<i>H. grandis</i> (Gardiner)	×	—	—	—	—
93.	<i>H. microconos</i> (Lamarck) Subfamily Montastreinae	×	—	—	×	—
94.	<i>Leptastrea purpurea</i> (Dana)	×	×	×	×	×
95.	<i>L. transversa</i> (Klunzinger)	×	×	×	×	×
96.	<i>Cyphastrea chalcidicum</i> (Forskål)	×	×	—	—	—
97.	<i>C. microphthalma</i> (Lamarck)	×	—	—	—	—
98.	<i>C. serailia</i> (Forskål)	×	×	×	×	×
99.	<i>Echinopora gemmacea</i> (Lamarck)	—	×	—	—	—
100.	<i>E. lamellosa</i> (Esper) Family Rhizangiidae	—	×	×	×	×
101.	<i>Oulicia rubeola</i> (Quoy and Gaimard) Family Oculinidae Subfamily Galaxeinae	—	×	×	×	×
102.	<i>Galaxea clavus</i> (Dana)	×	—	—	—	—
103.	<i>G. fascicularis</i> (Linnaeus) Family Merulinidae	×	×	×	×	×
104.	<i>Merulina ampliata</i> (Ellis and Solander) Family Mussidae	×	—	—	×	×
105.	<i>Symphyllia radians</i> (Milne- Edwards and Haime)	×	—	—	—	—



TABLE I (continued)

106. <i>S. recta</i> (Dana)	×	×	×	×	×
Family Pectiniidae					
107. <i>Mycedium tubifex</i> (Dana)	×	—	—	—	—
Suborder Caryophylliina					
Superfamily Caryophylliicae					
Family Caryophylliidae					
108. <i>Paracyathus profundus</i> (Duncan)	×	×	×	×	×
109. <i>Polycyathus verrilli</i> (Duncan)	×	×	×	×	×
Suborder Dendrophylliina					
Family Dendrophylliidae					
110. <i>Balanophyllia affinis</i> (Semper)	—	—	—	×	—
111. <i>Endopsammia philippinensis</i> (Milne-Edwards and Haime)	—	—	—	×	—
112. <i>Tubastrea aurea</i> (Quoy and Gaimard)	—	—	—	×	×
113. <i>Dendrophyllia coarctata</i> Duncan	—	×	—	×	—
114. <i>Turbinaria crater</i> (Pallas)	—	×	×	—	—
115. <i>T. ?frondens</i> (Dana)	—	×	—	—	—
116. <i>T. mesenterina</i> (Lamarck)	—	—	—	×	—
117. <i>T. peltata</i> (Esper)	×	—	×	—	—

× Recorded.

— Not recorded.

*Acropora*

A fairly common genus exhibiting here, ramose, arborescent, tufted, digitiform, corymbose and flabellate forms of growth. Massive members are not known. *A. corymbosa*, *A. haimeii*, *A. squamosa*, *A. nobilis*, *A. erythraeae* and *A. indica* flourish in the Gulf of Mannar side. At the Palk Bay side of Rameswaram *A. formosa* shows a preponderance. Other members are occasionally met with being nowhere common. The size of the colonies varies from 15–25 cm in greater diameter, though *A. corymbosa* and *A. surculosa* may attain a greater diameter of 60–80 cm. *Acropora* is mainly a reef-dwelling genus here, being poorly represented in the lagoon. Majority of the species display a brownish corallum with pink or white axial corallites. The only exception is *A. squamosa* which has a bluish green corallum with violet axial corallites.

*Astreopora*

The genus is known from here by a single specimen preserved in the Government Museum, Madras with the locality marked as Gulf of

Mannar. No living colony was found during the author's investigations.

### *Balanophyllia*

The shallow-water corals of this area include a single species of this genus known by only two specimens from Gulf of Mannar.

### *Coscinaraea*

Very rarely seen in both Palk Bay and Gulf of Mannar. About a dozen specimens are obtained all of which are small, ranging from 8–12 cm in greater diam.

### *Culicia*

This genus is found attached to rocks and dead *Porites*.

The small size of the calices and the raptoid nature of the corallum make the coral inconspicuous at the natural habitat. A good many of the specimens collected were found to be encrusted by Bryozoa.

### *Cyphastrea*

This medium caliced coral is generally seen in almost all localities around Mandapam. *C. microphthalma* is the most common member of the genus in Palk Bay, where colonies generally grow to 20 cm or more in diameter. Infestation by tube-dwelling polychaetes was noticed to cause the formation of slender digitiform processes on the upper side of several colonies. *C. serailia* and *C. chalcidicum* rarely occur. The polyps are found partly expanded during day time.

### *Dendrophyllia*

Not commonly seen in the shallow-waters of this area. Known only by a single species.

### *Echinopora*

Two foliaceous members of this genus are known from Gulf of Mannar. *E. lamellosa* forms very large platforms in the lagoon of the various islands in the Gulf of Mannar, growing mixed with similar platforms of *Montipora foliosa*. The occurrence of a large number of stalked buds as observed by Boschma (1928) on the under side of the plates is a very common phenomenon here. Curiously enough the genus

could not be collected in Palk Bay, though careful search over a period of four years was made.

#### *Endopsammia*

Seven small specimens belonging to this genus were collected from the under side of a colony of *Acropora surculosa* from Manauli Island. The living coral displayed an eosin red colour.

#### *Favia*

This genus is present in almost all localities in this area in fairly good numbers. *F. pallida* is the commonest member displaying both typical *pallida* and *hululensis* facies. It is very abundant at the shoreward side of the reef at Mandapam (Palk Bay). *F. stelligera* is very rare and could be collected only once. *F. fava* was noticed in fair numbers in Palk Bay but rarely in the Gulf of Mannar side.

#### *Favites*

This is not so important a reef-builder as *Favia*. *F. abdita* may sometimes grow to 60 or 70 cm in diameter in the Gulf of Mannar, but colonies are rare. In Palk Bay the species was observed near the Pamban Pass where some of the specimens possessed a sort of foliaceous corallum (Matthai, 1924). *F. virens* can be seen in Palk Bay but the author failed to notice any in the Gulf of Mannar. *F. halicora*, *F. pentagona* and *F. melicerum* are all rare and are known by a single specimen of each.

#### *Galaxea*

Not a conspicuous genus at any locality, but rarely seen under crevices of reef rocks. Individual colonies usually range from 10–20 cm in diam. The polyps are found expanded during day time with the tentacles hanging down along the thecal wall.

#### *Goniastrea*

The genus is fairly common here. Both *G. halicora* and *G. retiformis* grow to an average of 20–30 cm in size. The former species displays a wide range of skeletal variation. It is observed that specimens obtained from rocky environments and deeper waters have larger and deeper calices with thinner intercorallite walls than specimens collected from very shallow waters with sandy or muddy surroundings. Smaller colonies of *G. retiformis* are golden yellow in colour getting brown in older ones. The polyps of this genus are found partly expanded during day.

*Goniopora*

Nowhere in this area is it common. *G. stokesi* could be collected from the shoreward side of the reef at Palk Bay, but could not be seen on the Gulf of Mannar side. This is one of the excellent examples of coral becoming fully expanded during the day. The polyps were noticed to be expanded in the aquarium to a height of 4-5 cm completely hiding the white skeleton underneath. *G. duofaciata* is found in small patches at random. A black *Goniopora*, viz. *G. nigra*, with small polygonal calices occurs here, having remarkable affinity to certain fossil members of the genus (Pillai, 1969b).

*Hydnophora*

The genus, though represented by three species here, is nowhere common.

*Leptastrea*

This is probably the most common and successful genus of reef corals seen in rocky, sandy and muddy environments even from low water mark. It is represented by two species here. Individual colonies of this genus are seen mostly in small encrustations ranging from 5-15 cm in diam. Examination of a large number of specimens both in the field and the laboratory has revealed the existence of samples showing gradation from *L. transversa* to *L. purpurea* and as such their separate identity needs careful consideration. The polyps are partially expanded during day.

*Leptoria*

Very rare. No living colony could be seen during the author's investigations. A few specimens are preserved in the Museum of the Krusadai Island with the locality marked as Krusadai.

*Merulina*

Two live specimens of this genus were noticed in the Gulf of Mannar, one at Manauli Island and the other at Hare Island. The one at Hare Island measured nearly 50 cm in greater diameter. Dead and broken pieces of this genus are often found washed ashore in all localities around Mandapam.

*Montipora*

This is a very common genus inhabiting both the lagoon and the reef. Encrusting, ramose, massive and foliaceous forms occur.

*M. divaricata*, *M. digitata* and *M. foliosa* are the commonest members. Gravely (1927) has reported a papillate, ramose species (*M. spongiosa*) from Krusadai Island, remarking that it was very common. However, the present author failed to identify any specimen from Krusadai as belonging to *M. spongiosa*. The commonest member of the genus at present in Krusadai is *M. digitata*. *M. foliosa* is chiefly a lagoon form here. *M. divaricata* exhibits a wide range of skeletal variation both in the thickness of branches and calicular characters. Specimens from the deeper waters of Palk Bay showed taller coralla and more slender branches than specimens from the very shallow waters of the various lagoons of the Gulf of Mannar. Thicker coralla possess better developed papillae. One of the massive *Montipora* from the Manauli Island was found to be new and was described as such (Pillai, 1969a) under the name *M. manauliensis*. Among the encrusting species *M. verrilli* and *M. informis* are the commonest.

#### *Mycedium*

This genus is known from Palk Bay by a single specimen found washed ashore, soon after the cyclone of 1964. Living colonies were not seen in the shallow waters investigated.

#### *Pachyseris*

Very rare genus known by a single specimen from Manauli Island.

#### *Pavona*

Encrusting, hydno-phoroid and foliaceous forms of this genus occur, but is not a common reef-builder of this area. *P. decussata* was found in good numbers on the northern side of Manauli Island, usually attached to the top of *M. foliosa* and *Echinopora lamellosa*. A single specimen of *P. divaricata* was noticed in the lagoon of Krusadai Island and it measured nearly 70 cm in greater diameter. *P. varians* and *P. maldivensis* are very rarely met with.

#### *Paracyathus*

A solitary, fair-sized coral with a slightly broad base, white thecal wall and purple septa is commonly seen attached to rocks and dead corals in all localities around Mandapam.

#### *Platygyra*

Though represented by only a single species it is found in all the localities in fair numbers. The size of the colonies varies from a few centimetres to rarely a metre or so. The species exhibits a wide range

of skeletal variation in the thickness of the collines, length of valleys and porosity of the intercorallite walls. Polyps are found to be partly expanded during day.

#### *Plesiastrea*

Sewell (1935) has recorded the presence of this genus on the raised reef of Rameswaram Island. Skeletons preserved in a state of good condition can still be collected from there. No living colony was observed.

#### *Polycyathus*

This genus is often found attached to rocks and dead *Porites* both in the Gulf of Mannar and Palk Bay. It varies from isolated corallites to small colonies covering an area of 10–15 cm.

#### *Pocillopora*

This is the only genus of the family Pocilloporidae known to occur in this area. *P. damicornis* is the commonest and most abundant member of the genus. The sandy lagoon floor of the various islands in the Gulf of Mannar harbours a rich assemblage of this species. Colonies vary from 10–30 cm in spread, the lower part of the larger colonies being dead while the living zone extends from 10–15 cm from the top. Some of the specimens collected are very slender-stemmed approaching the condition of *P. acuta*. A few specimens of *P. danae* were noticed at the northern side of Manauli Island.

#### *Porites*

This is the most important reef-builder of this area and forms the major part of the reef framework. The majority of the colonies are dead and a good many exist in a semifossilized condition. *P. solida* and *P. somaliensis* surpass others in abundance and both the species are collected in large quantities for various economic purposes. Ramose members of this genus are so far not recorded.

#### *Psammocora*

Only *P. contigua* is recorded from here, although it is not common. A few small colonies were noticed in the lagoon of Krusadai Island and Pullivasal Island.

#### *Siderastrea*

Occasionally seen in both rocky and sandy surroundings in both lagoon and on the reef. *S. savignyana* is found in small patches while *S. radians* assume larger sizes some times as big as 30 cm in greater diameter.

*Symphylia*

Not a dominant reef-builder in this part of the Indian Ocean. Both *S. recta* and *S. radians* are seen rarely in the shoreward side of the reef in Palk Bay. The polyps are found partially expanded in the day time.

*Tabastrea*

Rare. Sometimes seen attached to dead *Porites* from the Gulf of Mannar. Not collected from Palk Bay.

*Turbinaria*

*T. peltata* occurs both in Palk Bay and the Gulf of Mannar. Two specimens of this species from Mandapam measured nearly 50 and 60 cm in diameter and possessed elevated corallites in some parts of the corallum. *T. mesenterina* was once noticed at Manauli Island. Gravely (1927) has mentioned the presence of *T. frondens* in the Gulf of Mannar. The genus *Turbinaria* is, however, not a dominant one among the coral fauna of this place.

COMPARISON OF THE CORAL FAUNA OF PALK BAY AND  
GULF OF MANNAR

It seems that a comparison of the coral faunas of these two areas is not out of place here, since such a comparison yields some interesting facts on the distribution of corals even in such a limited geographic area and separated only by a narrow strip of land. The dominance of a certain coral at one place and its paucity or absence on the other side is noteworthy. Based on the field studies made by the author a few such cases can be pointed out. A typical example is *Echinopora*. This genus is found in plenty in the Gulf of Mannar but was not seen in Palk Bay. A fair number of foliaceous *Pavona* found at Manauli Island could not be seen in Palk Bay and probably do not occur there. *A. erythraeae*, *A. nobilis* and *A. surculosa* while found in plenty in the Gulf of Mannar have not been seen on the other side. *A. squamosa* flourishes towards the western side of the reef in Palk Bay but the author failed to detect any in the Gulf of Mannar. Many more such disparities in the distribution can be pointed out but the species we are concerned with, are not found in abundance to substantiate the arguments. In general it may be stated that the reefs of the Gulf of Mannar are more luxuriant both in the number of species and their abundance than the Palk Bay reef. This can be attributed to the prevalence of comparatively more adverse environmental factors in the inshore regions of Palk Bay than in Gulf of Mannar (Pillai, in press, a).

## COMPOSITION OF THE SOUTHEAST INDIAN CORALS

There is a general similarity in the composition of the Scleractinia of the various parts of the Indo-Pacific region (Vaughan and Wells, 1943). However, regional variations are found both in the structure of the reef and in the composition of the fauna. Recently, Stoddart dealt with this aspect of the Indo-Pacific reef studies (Stoddart, in press). The number of genera of corals recorded from different areas in the Indo-Pacific varies considerably (Wells, 1954) and the disparity to an extent is due to insufficient collecting. It is true that some genera may not occur in some parts, but at the same time they may be abundant in another place.

At the present a total of 117 species divided among 33 genera are known from southeast India. Out of these, 110 species belonging to 26 genera are hermatypic and the other 7 species of 7 genera are ahermatypic. All these species are recorded to a depth of not more than 2 m at low tide. The deeper waters have yet to be investigated. The total number of genera (33) is less when compared to that of some other parts of the Indian Ocean where recent reports are available, such as the Red Sea (Wells, 1954) and Addu Atoll (Wells and Davies, 1966) with 47 genera each; Inhaca Island with 38 genera (Macnae and Kalk, 1958); Tuléar with 43 genera (Pichon, 1964) and Singapore with 40 genera (Purchon, 1956). At the same time it is higher than that of Tutia Reef in Tanganyika territory (Talbot, 1965) and Cocos-Keeling Island in the eastern Indian Ocean with 24 genera (Wells, 1950).

The most conspicuous elements in the coral fauna of southeastern India are the members of the family Acroporidae represented by three genera viz. *Acropora*, *Astreopora* and *Montipora*. *Montipora* and *Acropora* together constitute 39% of the total species recorded. The members of the families Poritidae and Faviidae are also rich and form the dominant reef-builders of this place. The occurrence of *Siderastrea*—a relic genus of the old Tethyan coral fauna—is also noteworthy. The extant form of a *Goniopora* viz. *G. nigra* with close affinities to some of the fossil members of this genus is interesting. The absence of certain very common Indo-Pacific genera from the faunal list of this area is conspicuous. Mentioned in this connection are *Stylophora*, *Seriatopora*, *Alveopora*, *Caulastrea*, *Diploastrea*, *Lobophyllia* and *Euphyllia* all of which are known throughout the Indo-Pacific. The paucity of the members of the family Fungiidae is another feature. *Fungia*, *Halomitra*, *Herpolitha*, *Polyphyllia* and *Podabacia* are still not known from here.

The occurrence of the various genera recorded from southeast India, in other parts of the Indian Ocean is tabulated in Table II. It is shown



TABLE II

*Distribution of southeast Indian coral genera in other parts of the Indian Ocean*

No.	Name of Genus	Red Sea	Tuléar	Maldives	Anda- mans	Singa- pore	Cocos- Keeling
		1	2	3	4	5	6
1.	<i>Acropora</i>	×	×	×	×	×	×
2.	<i>Astreopora</i>	×	×	×	—	—	×
3.	<i>Balanophyllia</i>	×	—	×	×	×	—
4.	<i>Coscinaraea</i>	×	×	×	—	—	—
5.	<i>Culicia</i>	—	×	×	—	—	×
6.	<i>Cyphastrea</i>	×	—	×	—	×	×
7.	<i>Dendrophyllia</i>	×	×	×	×	×	×
8.	<i>Echinopora</i>	×	×	×	×	×	×
9.	<i>Endopsammia</i>	—	—	×	—	—	—
10.	<i>Favia</i>	×	×	×	×	×	×
11.	<i>Favites</i>	×	×	×	×	×	×
12.	<i>Galaxea</i>	×	×	×	×	×	—
13.	<i>Goniastrea</i>	×	×	×	×	×	—
14.	<i>Goniopora</i>	×	×	×	—	×	—
15.	<i>Hydnophora</i>	×	×	×	×	×	×
16.	<i>Leptastrea</i>	×	×	×	×	×	×
17.	<i>Leptoria</i>	×	×	×	—	×	×
18.	<i>Merulina</i>	×	×	×	×	×	—
19.	<i>Montipora</i>	×	×	×	×	×	×
20.	<i>Mycedium</i>	—	×	×	—	×	—
21.	<i>Pachyseris</i>	×	×	×	—	×	—
22.	<i>Pavona</i>	×	×	×	×	×	×
23.	<i>Paracyathus</i>	×	—	×	—	×	—
24.	<i>Platygyra</i>	×	×	×	×	×	×
25.	<i>Plesiastrea</i>	×	×	×	×	×	×
26.	<i>Pocillopora</i>	×	×	×	×	×	×
27.	<i>Polycyathus</i>	—	—	—	×	—	—
28.	<i>Porites</i>	×	×	×	×	×	×
29.	<i>Psammocora</i>	×	×	×	×	×	×
30.	<i>Siderastrea</i>	×	—	—	×	—	—
31.	<i>Symphyllia</i>	×	×	×	×	×	—
32.	<i>Tubastrea</i>	×	×	×	—	×	×
33.	<i>Turbinaria</i>	×	×	×	—	×	—

× Recorded.

— Not recorded.

that 29 genera are common to the Red Sea and southeast India, only *Mycedium* among the hermatypic forms being missing from the faunal list of the Red Sea. Tuléar in Madagascar has 26 genera in common

with this area, *Siderastrea* and *Cyphastrea* among the reef-building forms are not known from Tuléar. The Maldivian fauna includes all the hermatypic genera of southeast India except *Siderastrea*. The Scleractinia of Andamans and Nicobar Islands are still not properly known but they have 21 genera in common with Palk Bay and the Gulf of Mannar. Twenty-seven genera are common to this area and Singapore while 18 are common to Cocos-Keeling and this area.

THE PRESENT CONDITION OF CORAL GROWTH IN SOUTHEAST  
INDIA

*The effect of sedimentation*

There is a wide regression of coral growth throughout the tropics (Gardiner, 1936). The reefs of southeast India are no exception to this world phenomenon. Both natural as well as artificial factors exercise their influence in the present state of deterioration of the coral growth in this area. The large degree of silt settlement has a remarkable effect. This appears to have a greater influence in the inshore regions of Palk Bay than in the Gulf of Mannar, especially during the northeast monsoon. The inshore waters of Palk Bay during the monsoon become muddy due to the presence of suspended sand and silt stirred up from the sandy shore by wave action caused by wind. This causes the death of a large number of coral colonies every year (Pillai, in press, a). The loss sustained due to this recurrent mortality is not replenished during the calm period, during which the corals of this area show a state of very active growth as evidenced by the presence of large numbers of buds in most of the living colonies. A clear case of the large scale death of corals due to the adverse effect of silt has been recently noticed at Mandapam in the Gulf of Mannar. Until recently, there was a rich coral growth of *Acropora* spp., *Montipora* spp., *Pocillopora damicornis*, *Favia pallida*, *Goniastrea retiformis* and *Porites* spp., on the granite wall of the pier at Mandapam. In October, 1969, heavy winds stirred up the protected waters making it muddy for a week. When normality was established and the water cleared, it was observed that almost all the corals had a white skeleton, a clear indication of death due to the effects of silt.

*The effect of the 1964 cyclone on the coral growth*

The devastating effects of cyclones on coral reefs are described by Stephenson, Endean and Bennett (1959) and Stoddart (1962, 1965) on the Great Barrier Reef and the British Honduras reefs and cays

respectively. Cyclonic winds of high velocity capable of generating enough mechanical force to break corals are not usual in this area, though they are common in the Bay of Bengal, which is a potential low pressure area during a monsoon. A severe cyclone during December, 1964 brought unprecedented death and destruction to the coastal areas of southeast India and the eastern side of Ceylon. The wind speed was reported to exceed 100 k at times during the night of 22nd December, 1964. The direction of the wind was felt at Mandapam from the north-east during the night of 22nd and southwest on the morning of 23rd. Tidal waves as high as 7.6 m were caused submerging the coastal areas. As the present author was familiar with the reefs of this area prior to the cyclone, he could record some of the resulting changes that occurred to the coral fauna. The branching corals, especially the *Acropora* spp. were the worst hit and very many large colonies of *A. corymbosa* and *A. surculosa* were found uprooted and washed ashore. Several corals, both ramose and massive, were later found dead on the reefs. The alcyonarians were reduced greatly in numbers at several places. On the whole there was a reduction of corals in most of the reefs.

*The effect of quarrying corals from the reef*

Nowadays corals are removed on a large scale from the various reefs of southeast India, for the preparation of calcium carbide, cement, lime, etc. In the Mandapam area alone nearly 50 country boats are currently engaged in this work. Each boat is manned by 4-6 people and during days of fair weather it is capable of bringing 4-6 m<sup>3</sup> of limestone from the reef to the shore (Pillai, in press, b). The exploited corals include different species of *Porites* and other massive corals attached to them. During seasons of peak activity approximately 250 m<sup>3</sup> of reef are removed daily by all the boats at work. This has been in progress for most of the last decade which has at present resulted in large scale destruction of the reefs and their associated fauna. The reefs of some of the islands in the Gulf of Mannar are almost completely exploited leaving little trace of their past existence.

THE CORAL FAUNA OF THE LACCADIVE ARCHIPELAGO

Our present knowledge of the coral fauna of the Laccadives is confined to Minicoy Atoll, except for scanty information from Chetlat Island at the extreme north end of the archipelago. We have fairly good accounts of the Minicoy fauna from Gardiner (1903, 1904, 1905) and Pillai (1971). The latter has given a detailed description of the distribution of the various genera of corals in different parts of the atoll.

An enumeration of the facts presented therein will only lead to repetition and only a brief account is presented here. A list of scleractinian species so far known from the Laccadives is given in Table IV.

A total of 69\* species of hermatypic corals divided among 26 genera is so far recorded from the Laccadives, of which all are known from the Minicoy Atoll. The Chetlat Island coral fauna is known to include 12 species belonging to 10 genera. The list from Chetlat is incomplete since no intensive collection has been made.

The commonest corals of Minicoy are *Acropora* spp., *Porites* spp., *Diploastrea heliopora*, *Goniastrea retiformis* and *Lobophyllia corymbosa*. The genus *Porites* is found in plenty on both lagoon shoals and on reef-flats. *Acropora* flourishes in the lagoon shoals: *A. formosa*, *A. palmata* and *A. pharaonis* are the commonest members, the first mentioned being distributed throughout while the latter two show a preponderance at the southwestern side of the lagoon. Huge colonies of *Diploastrea* measuring more than a metre in diameter are fairly common in the lagoon. This genus according to Gardiner (1904) was rare in 1899 when he visited and investigated the atoll. It seems that the colonies seen at present have grown during the last 70 years. This seems to be the case with *Lobophyllia*. *Pocillopora* occurs in fair numbers on the reef-flats but is rare in lagoon shoals. *P. damicornis* is the commonest member seen in shallow waters of Minicoy. *Fungia* was noticed in good numbers near Wiringili Island on the inner side of the lagoon reef, lying on sand or on the large colonies of *Heliopora*. *Euphyllia* occurs only near the shore at the lagoon side of the Lighthouse. The members of the Faviidae are found throughout the lagoon shoals and the reef-flats. None of the genera recorded from Minicoy are endemic, all being widely distributed throughout the Indo-Pacific. The ahermatypic forms are little investigated.

#### COMPARISON OF THE CORAL FAUNAS OF SOUTHEAST INDIA AND THE MINICOY ATOLL

As listed in Table III only 18 genera of corals are found to be common to both Minicoy and southeast Indian reefs. There are certain components of the Minicoy fauna such as *Diploastrea*, *Fungia*, *Euphyllia*, *Lobophyllia* and *Seriatopora* that are found missing from the faunal list of southeast India. Though *Acropora* is the richest member in both places the various species occurring differ considerably. *A. echinata*,

\* Pillai (1971) has listed 70 species. The inclusion of *Galaxea fascicularis* therein is based on an earlier erroneous identification of a specimen.

TABLE III

The occurrence of the various genera of *Scleractinia* in southeast India and Minicoy Atoll. The number in parentheses against each genus indicates the number of species so far recorded. Genera are listed in alphabetical order.

No.	Genus	Southeast India	Minicoy
1.	<i>Acanthastrea</i>	—	× (1)
2.	<i>Acropora</i>	× (24)	× (19)
3.	<i>Astreopora</i>	× (1)	—
4.	<i>Balanophyllia</i>	× (1)	—
5.	<i>Coscinaraea</i>	× (1)	—
6.	<i>Culicia</i>	× (1)	—
7.	<i>Cycloseris</i>	—	× (1)
8.	<i>Cyphastrea</i>	× (3)	—
9.	<i>Dendrophyllia</i>	× (1)	—
10.	<i>Diploastrea</i>	—	× (1)
11.	<i>Echinopora</i>	× (2)	—
12.	<i>Endopsammia</i>	× (1)	—
13.	<i>Euphyllia</i>	—	× (1)
14.	<i>Favia</i>	× (5)	× (3)
15.	<i>Favites</i>	× (5)	× (5)
16.	<i>Fungia</i>	—	× (3)
17.	<i>Galaxea</i>	× (2)	× (1)
18.	<i>Goniastrea</i>	× (3)	× (2)
19.	<i>Goniopora</i>	× (5)	× (2)
20.	<i>Hydnophora</i>	× (3)	× (1)
21.	<i>Leptastrea</i>	× (2)	× (3)
22.	<i>Leptoria</i>	× (1)	× (1)
23.	<i>Lobophyllia</i>	—	× (1)
24.	<i>Merulina</i>	× (1)	× (1)
25.	<i>Montipora</i>	× (20)	× (1)?
26.	<i>Mycedium</i>	× (1)	—
27.	<i>Pachyseris</i>	× (1)	—
28.	<i>Pavona</i>	× (4)	× (2)
29.	<i>Paracyathus</i>	× (1)	—
30.	<i>Platygyra</i>	× (1)	× (1)
31.	<i>Plesiastrea</i>	× (1)	× (1)
32.	<i>Pocillopora</i>	× (2)	× (3)
33.	<i>Polycyathus</i>	× (1)	—
34.	<i>Podabacia</i>	—	× (1)
35.	<i>Porites</i>	× (13)	× (6)
36.	<i>Psammocora</i>	× (1)	× (3)
37.	<i>Siderastrea</i>	× (2)	—
38.	<i>Stylophora</i>	—	× (1)
39.	<i>Symphyllia</i>	× (2)	× (2)
40.	<i>Tubastrea</i>	× (1)	—
41.	<i>Turbinaria</i>	× (4)	—

*A. efflorescens*, *A. hemprichi*, *A. palifera* and *A. reticulata* that are reported from Minicoy are not known from Palk Bay or the Gulf of Mannar. In this respect the Minicoy fauna has a closer affinity to the adjacent Maldives while the *Acropora* spp. of southeast India are nearer to the Malaysian region. The paucity of *Montipora* in Minicoy is a notable feature. The only record of this genus from Minicoy is that of Gardiner (1903) from the reef-flat of the Lighthouse area. The genus appears to have a tendency to become scarce towards the western sector of the Indian Ocean. While at least 20 species of this genus occur in southeast Indian reefs, only four species are known from the Addu Atoll in the Maldives (Wells and Davies, 1966) and from Tuléar in Madagascar (Pichon, 1964). Crossland (1948) has reported only one species of this genus from the Natal coast. The genera *Cyphastrea* and *Echinopora* that are found commonly in Indian Ocean reefs so far have not been recorded from Minicoy. The paucity of foliaceous corals is also worth mentioning. *Millepora* and *Heliopora* are important reef-builders in Minicoy but both are so far not known from the fringing reefs of southeast India.

#### SUMMARY

The extent of the coral reefs in Palk Bay and the Gulf of Mannar on the southeastern coast of India has been briefly discussed along with the physical and hydrobiological conditions of the area. A qualitative analysis of the various genera of Scleractinia hitherto recorded from the southeastern coast of India is presented with notes on their abundance. The coral fauna of this area is so far known to include 117 species divided among 33 genera, the members of the families Acroporidae, Faviidae and Poritidae forming the major components. It has been observed that the fauna of the Gulf of Mannar is richer both in the number of species and in their abundance than that of the adjacent Palk Bay.

The coral reefs of southeast India are fast deteriorating. The death of corals seems mainly to be due to the great interference of silt in the inshore waters. The large scale removal of corals for various industrial purposes is responsible for the great depletion of reef-dwelling and reef-building animals in this area. The detrimental effect of a recent cyclone on reef corals in this area has been discussed. It was noticed that the ramose types of corals were more affected by the mechanical force of waves generated by the wind than the massive and encrusting types.

The coral fauna of the Laccadive Archipelago is still poorly known. The available information is summarized. The Minicoy fauna is known

TABLE IV

*Check-list of corals from Minicoy Atoll. Those marked with an asterisk are also recorded from Chetland Island*

- 
- Order Scleractinia  
 Suborder Astrocoeniina  
 Family Thamnasteriidae
1. \**Psammocora contigua* (Esper)
  2. *P. (Stephanaria) exesa* Dana
  3. *P. (Plesioseris) haimeana* (Milne-Edwards and Haime)
- Family Pocilloporidae
4. \**Stylophora mordax* Dana
  5. \**Pocillopora damicornis* (Linnaeus)
  6. *P. verrucosa* (Ellis and Solander)
  7. *P. ligulata* Dana
  8. *P. eydouxi* (Milne-Edwards and Haime)
- Family Acroporidae
9. *Acropora abrotanoides* (Lamarck)
  10. *A. conferta* (Quelch)
  11. *A. corymbosa* (Lamarck)
  12. *A. echinata* (Dana)
  13. *A. efflorescens* (Dana)
  14. *A. formosa* (Dana)
  15. *A. forskali* (Ehrenberg)
  16. \**A. haimeii* (Milne-Edwards and Haime)
  17. *A. hemprichi* (Ehrenberg)
  18. *A. humilis* (Dana)
  19. *A. hyacinthus* (Dana)
  20. *A. indica* (Brook)
  21. *A. intermedia* (Brook)
  22. *A. monticulosa* (Brüggemann)
  23. *A. palifera* (Lamarck)
  24. *A. pharaonis* (Milne-Edwards and Haime)
  25. *A. rambleri* (Basset-Smith)
  26. *A. reticulata* (Brook)
  27. *A. squarrosa* (Ehrenberg)
  28. *Acropora* sp.
  29. *Montipora* sp.
- Suborder Fungiina  
 Superfamily Agariciidae  
 Family Agariciidae
30. *Pavona maldivensis* (Gardiner)
  31. \**P. varians* Verrill
- Superfamily Fungiicae  
 Family Fungiidae
32. *Cycloseris somervillei* (Gardiner)
-

TABLE IV (continued)

- 
33. *Fungia (Danafungia) danae* Milne-Edwards and Haime  
 34. \**(Fungia) fungites* (Linnaeus)  
 35. \**F. (Pleuractis) scutaria* Lamarck  
 36. *Podabacia crustacea* (Pallas)
- Superfamily Poriticae  
 Family Poritidae
37. *Goniopora minor* Grossland  
 38. *G. stokesi* Milne-Edwards and Haime  
 39. *Porites andreusi* Vaughan  
 40. *P. lutea* Milne-Edwards and Haime  
 41. *P. minicoiensis* Pillai  
 42. *P. palmata* Dana  
 43. *P. solida* (Forskål)  
 44. *P. somaliensis* Gravier
- Suborder Faviina  
 Superfamily Faviicae  
 Family Faviidae  
 Subfamily Faviinae
45. *Plesiastrea versipora* (Lamarck)  
 46. *Favia fava* (Forskål)  
 47. \**F. pallida* (Dana)  
 48. *F. speciosa* (Dana)  
 49. *Favites abdita* (Ellis and Solander)  
 50. *F. ehrenbergi* (Klunzinger)  
 51. *F. halicora* (Ehrenberg)  
 52. *F. melicerum* (Ehrenberg)  
 53. *F. pentagona* (Esper)  
 54. *Goniastrea hombroni* (Rousseau)  
 55. *G. retiformis* (Lamarck)  
 56. \**Platygyra lamellina* (Ehrenberg)  
 57. *Leptoria phrygia* (Ellis and Solander)  
 58. \**Hydnophora microconos* (Lamarck)
- Subfamily Monastreinae
59. *Diploastrea heliopora* (Lamarck)  
 60. *Leptastrea purpurea* (Lamarck)  
 61. *L. transversa* Klunzinger  
 62. *L. bottae* (Milne-Edwards and Haime)
- Family Oculinidae  
 Subfamily Galaxeinae
63. \**Galaxea hexagonalis*
- Family Morulinidae
64. *Merulina ampliata* (Ellis and Solander)
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TABLE IV (continued)

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	Family Mussidae
65.	<i>Acanthastrea echinata</i> (Dana)
66.	<i>Symphyllia radians</i> Milne-Edwards and Haime
67.	<i>S. recta</i> Dana
68.	<i>Lobophyllia corymbosa</i> (Forskål)
	Suborder Caryophylliina
	Superfamily Caryophylliicae
	Family Caryophylliidae
	Subfamily Eusmiliinae
69.	* <i>Euphyllia glabrescens</i> (Chamisso and Eysenhardt)

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to include 69 species belonging to 26 genera. The dominant elements in the Minicoy fauna are the members of the families Acroporidae, Faviidae and Poritidae.

A comparison of the coral faunas of southeast India and the Minicoy Atoll is made. Though *Acropora* is the richest genus at both places, the various species occurring are markedly different, those of Minicoy showing a closer affinity to those of the Maldives while the *Acropora* spp. of southeast India are nearer to those of the Malaysian region.

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