The new sponge resources of Orissa coast

From the 215 records of sponges in Indian museums\(^1\), only 20 specimens were reported from Orissa coast before 1920. The collections were made (1908–1910) by trawl in Golden Crown and Investigator expeditions mostly from depths of 36–54 m. Thereafter, there has been no information regarding the coral-based sedentary organisms off Orissa coast.

During the last two decades, active research is being carried out by scientists throughout the world on ‘drugs from the sea’. In India too, during the last six years, considerable amount of work has been done in several universities and institutes. Regional Research Laboratory (RRL), Bhubaneswar has taken up investigations on the marine organisms off Orissa coast (Bay of Bengal). While collecting non-edible/ poisonous/venomous benthic fauna mostly by trawling, several indications of the existence of sedentary fauna like gorgonids, sponges, hard corals and soft corals had been noticed by the authors and it was decided to collect these organisms.

Under this project, the geophysical survey of the sea bed was carried out by NIO, RC, Visakhapatnam, utilizing dual frequency echosounder, side scan sonar, sub-bottom profiler and portable global positioning system. The area of study is off Gopalpur coast between

![Figure 1. Location map of Reefal sedentary resources.](image1)

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![Figure 2. Azorica pfeifferae Carter, species no. 46.](image2)

![Figure 3. Aurora globostellata Carter, species no. 47.](image3)
Phylum Porifera Grant
Class Demospongiae Sollas
Order KERATOSIDA Grant
Family Spongidae Gray
Subfamily Sponginae da Laubenfels
Genus Spongia Linnaeus
1. Spongia officinalis Lin. var. ceylonensis Dendy
Genus Heteronema Keller
2. Heteronema erecta Keller
Genus Hyattella Lendenfeld
3. Hyattella cribleformis (Hyatt)
Genus Phyllospongia Ehlers
4. Phyllospongia foliaceaens (Pallas)
Genus Ircinia Nardo
5. Ircinia sp. 1
6. Ircinia sp. 2
7. Ircinia sp. 3
Subfamily Verongiidae de Laubenfels
Genus Verangia Bowerbank
8. Verangia sp.
Genus Fasciospongia Burton
9. Fasciospongia cavernosa (Schmidt)
Family Dysidea Gray
Genus Dysidea Johnston
10. Dysidea fragilis (Montagu)
Genus Dendrilla Lendenfeld
11. Dendrilla nigra (Dendy)
Family Aplysidiidae Voemaer
Genus Psammopplysia Keller
12. Psammopplysia purpurea (Carter)
Order HAPLOSCLERIDA Topsent
Family Calypsiodaidee de Laubenfels
Genus Callyspongia Dach & Mich.
13. Callyspongia fibrosa (Ridley & Dendy)
14. Callyspongia sp. 1
15. Callyspongia sp. 2
16. Callyspongia sp. 3
Family Adoicidae de Laubenfels
Genus Petrobia Voemaer
17. Petrobia testudinaria (Lamarck)
18. Petrobia sp. 1
19. Petrobia sp. 2
20. Petrobia sp. 3
21. Petrobia sp. 4
Order POECIOLSCLERIDA Topsent
Family Coelosphaeridae Hentschel
Genus Oceanapia Norman
22. Oceanapia sp. 1
23. Oceanapia sp. 2
Family Raspailiidae Hentschel
Genus Raspaillia Nardo
24. Raspaillia anastomosa Kumar
25. Raspaillia sp. 1
26. Raspaillia sp. 2
Genus Axinella Ehlers
27. Axinella tubulata (Bowerbank)
28. Axinella sessilis (Carter)
Family Amphiplectidae de Laubenfels
Genus Biomiya Gray
29. Biomiya foris (Topsent)
Order HALICHONDRIDAE Vosmaer
Family Axinellidae Ridley & Dendy
Subfamily Axinellinae de Laubenfels
Genus Axinella Schmidt
30. Axinella carteri (Dendy)
31. Axinella agariciformis (Dendy)
32. Axinella sp. 1
33. Axinella sp. 2
Genus Phakellia Bowerbank
34. Phakellia dendyi Bergquist
Subfamily Higginsiinae de Laubenfels
Genus Myrmekiiderma Ehlers
35. Myrmekiiderma granulata (Esper)
Family Hymeniacidonidae de Laubenfels
Genus Acanthella Schmidt
36. Acanthella crenulata (Dendy)
37. Acanthella elongata (Dendy)
38. Acanthella rumosa Kumar
Family Halichondriidae Gray
Genus Halichondria Flemming
39. Halichondria panicea Johnston
Order HADROMERIDA Topsent
Family Spirastrellidae Ridley & Dendy
Genus Spirastrella Schmidt
40. Spirastrella inconstantes (Dendy)
41. Spirastrella vagabunda Ridley
Order EPIPOLASIDA Sollas
Family Sollassellidae Lendenfeld
Genus Epipolisis de Laubenfels
42. Epipolisis topsenti (Dendy)
43. Epipolisis Sp. 1
44. Epipolisis Sp. 2
Family Jaspidae de Laubenfels
Subfamily Raphidistinae de Laubenfels
Genus Prostyllysa Topsent
45. Prostyllysa foetidis (Dendy)
Family Seleritidermidae Sollas
46. Azorica Carter
47. Azorica pfeifferae Carter
Order CHORISTIDIDA Sollas
Family Ancorinidae Gray
Subfamily Stellettinae Sollas
Genus Aurora Sollas
48. Aurora globostellata (Carter)
Genus Stelleta Schmidt
49. Stelleta sp.
Family Carioididae de Laubenfels
Genus Parateillia Dendy
50. Parateilla baccata (Selenka)
Order CARNOSIDA Carter
Family Halinidae de Laubenfels
Subfamily Halininae de Laubenfels
Genus Derciopsis Dendy
51. Derciopsis minor Dendy
52. Derciopsis sp. 1
53. Derciopsis sp. 2
Genus Plakorix Schulze
54. Plakorix simplex (Schulze)
Subfamily Corticiinae Voemaer
Genus Plakina Schulze
55. Plakina monolopho Schulze
Classification by de Laubenfels, 1936

Chatapur and Barua (Figure 1). A 14 m long, 5 m wide Sima class fishing trawler was used.

These surveys resulted in demarcating submerged ridge systems, the details of which will be published separately. The prominent features delineated include: (i) a 14 km long hard rocky outcrop with 3–5 m elevation and 150–250 m width along 30 m contour (19°13′00″N, 84°57′05″E to 19°08′70″N, 84°52′07″E) as a lineation extending parallel to the coast from Gopalpur to Sonapuramet in the south and (ii) a further 9 km stretch of lineation, 100–200 m wide with multiple peaks and 3–8 m elevation (19°02′80″N, 84°47′64″E to 18°56′75″N, 84°43′30″E) at 25–30 m depth which starts 2 km south of Sonapuramet estuary between Sonapuramet and Barua.

Since the sedentary marine organisms from these rocky substrata cannot be collected by nets or grabs satisfactorily, SCUBA diving techniques were used for collections. The organisms were preserved in 10% formalin or 70% alcohol.
and kept in the repository of Forest & Marine Products Division of the laboratory and at NIO, Goa.

Under-water video documentation of sedentary life was carried out. This helped in collecting information about population density, distribution of different species, nature of rocky bottom and also in avoiding unwarranted destruction of marine sedentary life.

Sponges belonging to 8 orders, 18 families, 31 genera and 54 species, collected from selected areas of the rocky sea bottom are listed in Table 1 (see Figures 2 and 3). No sponge in present collections is found in the Indian Museum records. Only five sponges (Sl. nos 4, 17, 45, 46 and 49) are common to the Andaman sponges*. The nature and possible extension of similar lineations further south are under investigation.


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