

The new sponge resources of Orissa coast

From the 215 records of sponges in Indian museums¹, 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 2. *Azorica pfeifferae* Carter, species no. 46.

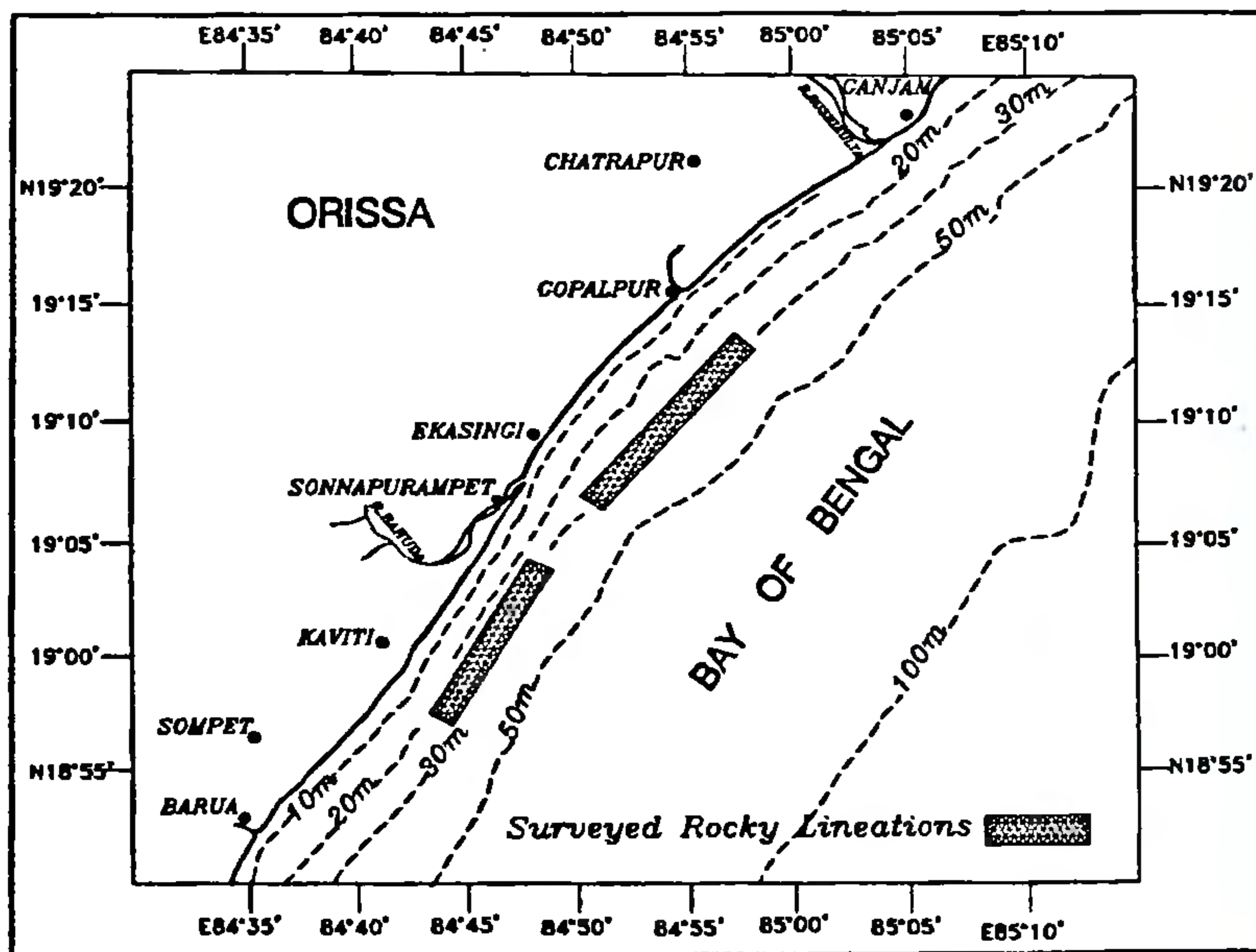


Figure 1. Location map of Reefal sedentary resources.



Figure 3. *Aurora globostellata* Carter, species no. 47.

Table 1. List of sponges

Phylum Porifera Grant	18. <i>Petrosia</i> sp. 1	39. <i>Halichondria panicea</i> Johnston
Class Demospongiae Sollas	19. <i>Petrosia</i> sp. 2	Order HADROMERIDA Topsent
Order KERATOSIDA Grant	20. <i>Petrosia</i> sp. 3	Family Spirastrellidae Ridley & Dendy
Family Spongiidae Gray	21. <i>Petrosia</i> sp. 4	Genus <i>Spirastrella</i> Schmidt
Subfamily Spongiinae de Laubenfels	Order POECILOSCLERIDA Topsent	40. <i>Spirastrella inconstans</i> (Dendy)
Genus <i>Spongia</i> Linnaeus	Family Coelosphaeridae Hentschel	41. <i>Spirastrella vagabunda</i> Ridley
1. <i>Spongia officinalis</i> Lin. var. <i>ceylonensis</i> Dendy	Genus <i>Oceanapia</i> Norman	Order EPIPOLASIDA Sollas
Genus <i>Heteronema</i> Keller	22. <i>Oceanapia</i> sp. 1	Family Sollasellidae Lendenfeld
2. <i>Heteronema erecta</i> Keller	23. <i>Oceanapia</i> sp. 2	Genus <i>Epipolasis</i> de Laubenfels
Genus <i>Hyattella</i> Lendenfeld	Family Raspailiidae Hentschel	42. <i>Epipolasis topsenti</i> (Dendy)
3. <i>Hyattella cribriformis</i> (Hyatt)	Genus <i>Raspailia</i> Nardo	43. <i>Epipolasis</i> Sp. 1
Genus <i>Phyllospongia</i> Ehlers	24. <i>Raspailia anastomosa</i> Kumar	44. <i>Epipolasis</i> Sp. 2
4. <i>Phyllospongia foliascens</i> (Pallas)	25. <i>Raspailia</i> sp. 1	Family Jaspidae de Laubenfels
Genus <i>Ircinia</i> Nardo	26. <i>Raspailia</i> sp. 2	Subfamily Rhaphidistinae de Laubenfels
5. <i>Ircinia</i> sp. 1	Genus <i>Aulospongius</i> Norman	Genus <i>Prostylyssa</i> Topsent
6. <i>Ircinia</i> sp. 2	27. <i>Aulospongius tubulatus</i> (Bowerbank)	45. <i>Prostylyssa foetida</i> (Dendy)
7. <i>Ircinia</i> sp. 3	28. <i>Aulospongius sessilis</i> (Carter)	Family Scleritodermidae Sollas
Subfamily Verongiinae de Laubenfels	Family Amphilectidae de Laubenfels	Genus <i>Azorica</i> Carter
Genus <i>Verongia</i> Bowerbank	Genus <i>Biemna</i> Gray	46. <i>Azorica pfeifferae</i> Carter
8. <i>Verongia</i> sp.	29. <i>Biemna fortis</i> (Topsent)	Order CHORISTIDA Sollas
Genus <i>Fasciospongia</i> Burton	Order HALICHONDRIIDA Vosmaer	Family Ancorinidae Gray
9. <i>Fasciospongia cavernosa</i> (Schmidt)	Family Axinellidae Ridley & Dendy	Subfamily Stelletinae Sollas
Family Dysideidae Gray	Subfamily Axinellinae de Laubenfels	Genus <i>Aurora</i> Sollas
Genus <i>Dysidea</i> Johnston	Genus <i>Axinella</i> Schmidt	47. <i>Aurora globostellata</i> (Carter)
10. <i>Dysidea fragilis</i> (Montagu)	30. <i>Axinella carteri</i> (Dendy)	Genus <i>Stelletta</i> Schmidt
Genus <i>Dendrilla</i> Lendenfeld	31. <i>Axinella agariciformis</i> (Dendy)	48. <i>Stelletta</i> sp.
11. <i>Dendrilla nigra</i> (Dendy)	32. <i>Axinella</i> sp. 1	Family Craniellidae de Laubenfels
Family Aplysillidae Vosmaer	33. <i>Axinella</i> sp. 2	Genus <i>Paratetilla</i> Dendy
Genus <i>Psammaplysilla</i> Keller	Genus <i>Phakellia</i> Bowerbank	49. <i>Paratetilla bacca</i> (Selenka)
12. <i>Psammaplysilla purpurea</i> (Carter)	34. <i>Phakellia dendyi</i> Bergquist	Order CARNOSIDA Carter
Order HAPLOSCLERIDA Topsent	Subfamily Higginsiinae de Laubenfels	Family Halinidae de Laubenfels
Family Callyspongiidae de Laubenfels	Genus <i>Myrmekioderma</i> Ehlers	Subfamily Halininae de Laubenfels
Genus <i>Callyspongia</i> Duch. & Mich.	35. <i>Myrmekioderma granulata</i> (Esper)	Genus <i>Dercitopsis</i> Dendy
13. <i>Callyspongia fibrosa</i> (Ridley & Dendy)	Family Hymeniacionidae de Laubenfels	50. <i>Dercitopsis minor</i> Dendy
14. <i>Callyspongia</i> sp. 1	Genus <i>Acanthella</i> Schmidt	51. <i>Dercitopsis</i> sp. 1
15. <i>Callyspongia</i> sp. 2	36. <i>Acanthella cavernosa</i> (Dendy)	52. <i>Dercitopsis</i> sp. 2
16. <i>Callyspongia</i> sp. 3	37. <i>Acanthella elongata</i> (Dendy)	Genus <i>Plakortis</i> Schulze
Family Adocidae de Laubenfels	38. <i>Acanthella ramosa</i> Kumar	53. <i>Plakortis simplex</i> (Schulze)
Genus <i>Petrosia</i> Vosmaer	Family Halichondriidae Gray	Subfamily Corticiinae Vosmaer
17. <i>Petrosia testudinaria</i> (Lamarck)	Genus <i>Halichondria</i> Flemming	Genus <i>Plakina</i> Schulze
		54. <i>Plakina monolopha</i> Schulze

Classification by de Laubenfels, 1936

Chatrapur and Barua (Figure 1). A 14 m long, 5 m wide *Sona* class fishing trawler was used.

These surveys resulted in demarcating submerged ridge systems², 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°52.70'E) as a lineation extending parallel to the coast from Gopalpur to Sonapurampet 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 Sonapurampet estuary between Sonapurampet 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

SCIENTIFIC CORRESPONDENCE

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 sponges³. The nature and possible extension of similar lineations further south are under investigation.

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