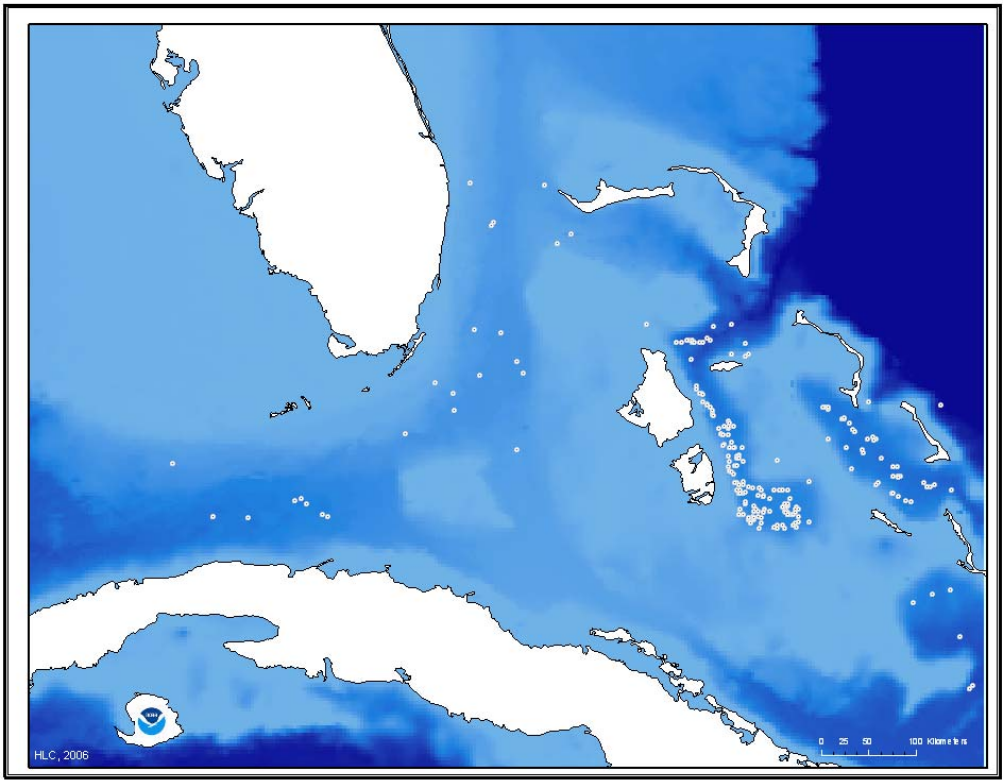
NOAA Technical Memorandum NMFS-SEFSC-598

Deep Sea Penaeoid and Sergestoid Shrimps Collected by the R/V "*Columbus Iselin*" from the Bahamas Region and Straits of Florida 1972-1976



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U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
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INTRODUCTION

The Rosenstiel School of the Marine and Atmospheric Science of the University of Miami conducted nine cruises from 1972 to1976 on the R/V *Columbus Iselin* (Table 1) to collect deep-sea fishes from the Bahamas Region, primarily those of the Tongue of the Ocean (G. L. Voss; C. R. Robins and N. A. Voss, per. comm.). In addition, sampling was conducted at various water depths in the south and southeastern waters of Florida. Together with the fishes, a large number of Dendrobranchiate (Penaeoidea and Sergestoidea) shrimps and prawns were captured which are the subject of this study. The data acquired on these cruises were taken from the vessel's log (Table 2).

The Tongue of the Ocean comprises several elongated deep extensions from the Atlantic Ocean basin, between Andros Island to the west and New Providence Island to the east (Athearn, 1963).The sampling in the Tongue of the Ocean was very intense, but it was scattered and the effort limited in most of the other areas, except in Exuma Sound (Fig. 1). The number of records of dendrobranchiate shrimps from these deep basins around the Bahamas has been limited, both in number of species and specimens. Therefore, the present investigation resulted in establishing new geographical records of many species especially of the family Sergestidae.

The geographic area cover by this study includes the three basins and a few additional areas of the Bahamas region, Northwest Providence Channel and a few number of localities in the Straits of Florida (Fig. 1 and Table 3). During the nine cruises , 1, 221 dendrobranchiate shrimps were collected at 225 stations. The specimens comprised 41 species, which included 21 species from 4 penaeoid families: Aristedae, Benthesicymidae, Penaeidae and Solenoceridae, and 20 species from the sergestoid family, Sergestidae (Table 4). The bathymetric distribution of the species ranged between 37-50 and 3219-3237 m. (Table 5). The depth of most of the stations ranged from 1, 200 to 1, 300 m; only 4 stations from the NW Providence Channel were deeper than 3,000 m.

MATERIALS AND METHODS

Sampling was conducted with several types of gear. In the majority of the stations the gear laid out on the hard bottom, some at mid-water and a few below 1000 m. Most samples were taken with two four seam semi-balloom otter trawls 41 feet (12.5 m) and 45 feet (13.7 m) Marinovich Gulf of México shrimp trawls, occasionally with 10-foot IKMT (Isaacs and Kidd Mid-water Trawl) as described in Voss, 1966. In a few stations a 10 foot Otter Trawl was used. In four stations, sampling was conducted with a 5-foot Blake trawl, a 10 foot try net and a 3 foot plankton net. A standardized trawling routine was strictly followed (Sulak,1982).

The taxonomy here follows that in the book by Pérez Farfante and Kensley (1997), Vereshchaka (2000), and ITIS (2006). The works of Boone (1927), Burkenroad (1936) and Lemaitre (1984) were consulted and the information provided by Sulak's dissertation (1982) and Sulak (pers. comm.), as well as that by C. Richard Robins (pers. comm.) were particularly helpful.

All the specimens used in this study have been accessioned into the Marine Invertebrate Museum of the Rosenstiel School of Marine and Atmospheric Science, University of Miami.

RESULTS

Benthisicymidae

New Records:

Benthesicymus bartletti. This species was the most abundant in the Tongue of the Ocean. It was present in 127 stations of a total of 225 .

Benthesicymus cf crenatus. Specimens of this species were found for the first time in the Western Atlantic: Tongue of the Ocean and Straits of Florida. It was previously known only from the Central and Northeast Pacific Ocean.

Sergestidae

Considering the few collections made from the R/V *Columbus Iselin* in the Straits of Florida, only 24 out of 225 stations, the number of species (20 of a total of 41) found in the area is striking. Also interesting is the number of new records reported herein.

New Records:

Sergestes armatus. From the Bahamas, the Straits of Florida, North -Western Atlantic Ocean, except off Bermuda.

Sergestes atlanticus. From the Bahamas, the Straits of Florida, North -Western Atlantic Ocean, except from off Bermuda, and the Sargasso Sea.

Sergestes curvatus. From the Bahamas, the Straits of Florida, North -Western Atlantic Ocean.

Sergestes edwardsi. From the Bahamas, Northeast Providence Channel, the Straits of Florida, and North - Western Atlantic Ocean.

Sergestes paraseminudus. From the Bahamas, the Straits of Florida, and North - Western Atlantic Ocean.

Sergestes pectinatus. From the Straits of Florida, and North -Western Atlantic Ocean, except off Bermuda, and the Sargasso Sea.

Sergestes sargassi. From the Bahamas, North -Western Atlantic Ocean, except off Bermuda, and the Sargasso Sea.

Sergestes vigilax. From the Straits of Florida, North - Western Atlantic Ocean, except off Bermuda.

Sergia mollis. From the Bahamas.

Sergia regalis. New record from the Bahamas and North -Western Atlantic Ocean.

Sergia splendes. From the Bahamas, Straits of Florida and North-Western Atlantic Ocean, except off Bermuda.

Sergia tenuiremis. New record from the Bahamas and North-West Atlantic Ocean

Sergia wolffi. From the Bahamas, Straits of Florida, North-Western Atlantic Ocean, except from the Caribbean Sea.

Bibliography

Athearn, W. D. 1963. Bathymetry of the Straits of Florida and the Bahamas Islands. Bulletin of Marine Science of the Gulf and Caribbean. 13(3): 365-373.

Boone, P. L. 1927. Scientific Results of the First Oceanographic Expedition of the "Pawnee" 1925. Crustacea from Tropical East American Sea. Bulletin of the Bingham Oceanographic Collection, Vol. I: (Art. 2):1-147.

Burkenroad, M. D. 1936. The Aristeinae, Solenocerinae and Pelagic Penaeinae of the Bingham Oceanographic Collection. Bulletin of the Bingham Oceanographic Collection, Vol. VI (Art. 2):1-151.

Integrated Taxonomic Information System (IT IS). http://www.itis.usda.gov as of July 26th 2006

Lemaitre, R., 1984. Decapod Crustaceans form Cay Sal Bank, Bahamas, with notes on their Zoogeographic Affinities. Journal of Crustacean Biology, 4(3):425-447.

Pérez Farfante, I. and Kensley, B. 1977. Penaeiod and Sergestoid Shrimps and Prawns of the World: Key and Diagnoses for the Families and Genera. Mémoires du Muséum National d'Histoire Naturelle, 175:1-233.

Sulak, K. J. 1982. A Comparative Taxonomic and Ecological Analysis of Temperate and Tropical Demersal Deep-sea Fish Faunas in the Western North Atlantic. Ph. D. Dissertation. University of Miami: 181 pp.

Vereshchaka, Alexander L. 2000. Revision of the genus Sergia (Decapoda: Dendrobranchiata: Sergestidae): taxonomy and distribution. Galathea Report, vol. 18: Scientific Results of the Danish Deep-Sea Expedition Round the World 1950-52. 69-207

Voss, G. L.
1966. The R/V Pillsbury Deep-Sea Biological Expedition of the Gulf of Guinea, 1964-65-2. Biological Collecting Gear and its Use Aboard R/V Pillsbury. Studies in Tropical Oceanography, No. 4(part 1): 61-81.

Table 1. Cruises numbers conducted on the R/V "*Columbus Iselin*" with their respective number of stations and dates from which dendrobranchiate shrimps were analyzed.

Cruises	Stations	Date
7203	1-37	1-VII-72 --- 9-VII-72
7305	38-1900	21-II-73 --- 13-III-73
7315	101-142	20-IX-73 -- 28-IX-73
7402	143-194	2-II-74 --- 28-IX-73
7403	195-245	17-II-74 --- 27-II-74
7406	246-289	29-IX-74 -- 11-XI-74
7504	299-353	2-IV-75 --- 21-IV-75
7511	354-404	19-VIII-75 -- 6-IX-75
7603	405-441	28-II-76 --- 1-III-76

Table 2. List of R/V "Columbus Iselin Stations

Columbus Basin	CB[1]
Exuma Sound	ES
Tongue of the Ocean	TOTO
Northeast Providence Channel	NE PCh
New Providence Island	NPI.
Grand Bahamas Island	GBI.
Great Bahama Bank	GBB
Straits of Florida	S of FL

[1] Initials indicate location of stations in relation to a close main sampling area.
[2] Depths of the stations are those at which the specimens were captured

Station #	Date	Depth[2] (m)	Latitude	Longitude	Location
CI-9	4-VII - 72	1318-1329	23^0 52’ N	77^0 04’ W	TOTO
CI-10	4- VII -72	1300-1315	23^0 47’ N	76^0 48’ W	TOTO
CI-11	4- VII -72	1170-1180	23^0 34’ N	76^0 37’ W	TOTO
CI-12	4- VII -72	1290-1302	23^0 32’ N	76^0 55’ W	TOTO
CI-14	5- VII -72	1246-1371	23^0 35’ N	77^0 11’ W	TOTO
CI-20	6- VII -72	1298-1399	24^0 12’ N	77^0 17’ W	TOTO
CI-21	6- VII -12	1554-1573	24^0 28’ N	77^0 25’ W	TOTO
CI-22	6- VII -72	485-612	25^0 15’ N	77^0 13’ W	NE NPI.
CI-24	6- VII -72	1710-1719	24^0 36’ N	77^0 32’ W	TOTO
CI-25	7- VII -72	1948-2012	24^0 47’ N	77^0 38’ W	TOTO
CI-27	7- VII -72	658-666	25^0 26’ N	78^0 09’ W	NE GBB
CI-31	8- VII -72	3054-3164	25^0 18’ N	77^0 35’ W	NE PCh
CI-32	8- VII -72	3017-3045	25^0 17’ N	77^0 33’ W	NE PCh
CI-33	9- VII -72	3219-3237	25^0 26’ N	77^0 21’ W	NE PCh
CI-36	9- VII -72	290	25^0 09’ N	77^0 11’ W	NPI
CI-37	9- VII -72	512-540	25^0 08’ N	77^0 13’ W	NPI
CI-40	22-II-73	1307-1317	23^0 47’ N	76^0 59’ W	TOTO
CI-41	22- II -73	1298	23^0 43’ N	76^0 49’ W	TOTO
CI-42	23- II -73	1280	23^0 31’ N	76^0 44’ W	TOTO
CI-45	24- II -73	750-850	23^0 41’ N	77^0 16’ W	TOTO
CI-46	24- II -73	1234-1280	23^0 30’ N	77^0 05’ W	TOTO
CI-48	25- II -73	1390	23^0 44’ N	77^0 13’ W	TOTO
CI-51	25- II -73	1290	23^0 38’ N	76^0 49’ W	TOTO
CI-52	25- II -73	850	23^0 37’ N	77^0 09’ W	TOTO
CI-54	26- II -73	1298-1335	23^0 54’ N	77^0 11’ W	TOTO
CI-55	26- II -73	1353	23^0 56’ N	77^0 18’ W	TOTO
CI-56	26- II -73	1380-1399	24^0 01’ N	77^0 20’ W	TOTO
CI-57	27- II -73	1400-1409	24^0 05’ N	77^0 23’ W	TOTO
CI-60	28- II -73	1536-1545	24^0 24’ N	77^0 27’ W	TOTO
CI-63	1- III -73	910	24^0 38’ N	76^0 26’ W	ES
CI-64	1- III -73	340	24^0 40’ N	75^0 22’ W	NE ES
CI-69	3- III -73	1100	24^0 26’ N	76^0 12’ W	ES
CI-70	4- III -73	1673-1682	24^0 30’ N	76^0 14’ W	ES
CI-72	4- III -73	1884	24^0 00” N	75^0 45’ W	ES
CI-73	4- III -73	1792	23^0 46’ N	75^0 42’ W	ES
CI-75	5- III -73	1737	24^0 15’ N	76^0 07’ W	ES
CI-76	5- III -73	1582-1591	24^0 39’ N	76^0 28’ W	ES
CI-78	6- III -73	1682-1701	24^0 25’ N	76^0 11’ W	ES
CI-82	8- III -73	1000	23^0 48’ N	77^0 03’ W	TOTO
CI-83	9- III -73	640-713	24^0 08’ N	77^0 14’ W	TOTO

CI-84	9- III -73	741-805	24^0 16' N	77^0 15' W	TOTO
CI-85	9- III -73	1510-1545	24^0 23' N	77^0 23' W	TOTO
CI-87	10-III -73	1719-1746	24^0 37' N	77^0 32' W	TOTO
CI-89	10-III -73	1938-1966	24^0 47' N	77^0 39' W	TOTO
CI-90	10-III -73	600-640	24^0 51' N	77^0 41' W	TOTO
CI-96	12-III -73	2524-2615	25^0 06' N	77^0 44' W	NE PCh.
CI-97	12-III -73	2679-2816	25^0 17' N	77^0 45' W	NE PCh.
CI-98	13 III -73	900-920	25^0 17' N	77^0 43' W	NE PCh.
CI-101	20-IX -73	1584-1604	24^0 27' N	77^0 28' W	TOTO
CI-103	21-IX -73	1423-1450	24^0 08' N	77^0 22' W	TOTO
CI-106	21-IX -73	1261-1311	23^0 52' N	76^0 54' W	TOTO
CI-110	22-IX -73	1364	23^0 41' N	77^0 02' W	TOTO
CI-113	23-IX -73	1368	23^0 41' N	77^0 07' W	TOTO
CI-114	23-IX -73	1334-1342	23^0 41' N	76^0 50' W	TOTO
CI-115	23-IX -73	1307-1324	23^0 38' N	76^0 47' W	TOTO
CI-118	24-IX -73	400-465	23^0 38' N	76^0 46' W	TOTO
CI-119	24 IX -73	350-425	23^0 40' N	76^0 51' W	TOTO
CI-122	24 IX -73	1428-1439	24^0 06' N	77^0 19' W	TOTO
CI-125	25-IX -73	1485-1507	24^0 30' N	77^0 22' W	TOTO
CI-126	25-IX -73	1860-1884	24^0 41' N	77^0 35' W	TOTO
CI-133	26-IX -73	1000-1250	25^0 25' N	77^0 31' W	NE PCh
CI-138	28-IX -73	448-466	26^0 17' N	78^0 52' W	S GBI.
CI-139	28-IX -73	353-358	26^0 12' N	79^0 00' W	NW GBB
CI-140	28-IX -73	732-738	26^0 24' N	79^0 36' W	S of FL (off Pompano Beach)
CI-142	28-IX -73	329-362	26^0 46' N	79^0 49' W	S of FL (off Palm Beach)
CI-143	2-II- 74	1754-1856	24^0 40' N	77^0 35' W	TOTO
CI-144	3-II -74	1483-1506	24^0 30' N	77^0 22' W	TOTO
CI-145	3-II -74	1430-1447	24^0 16' N	77^0 19' W	TOTO
CI-147	3-II -74	1334-1378	23^0 57' N	77^0 14' W	TOTO
CI-148	3-II -74	1333-1379	24^0 06' N	77^0 18' W	TOTO
CI-149	4-II -74	1387-1390	23^0 52' N	77^0 18" W	TOTO
CI-150	4-II -74	1355-1360	23^0 49' N	77^0 03' W	TOTO
CI-151	4-II -74	1301-1315	23^0 52' N^0	76^0 49' W	TOTO
CI-153	4-II -74	1313-1314	23^0 42' N	76^0 44' W	TOTO
CI-154	4-II -74	1311	23^0 32' N	76^0 46' W	TOTO
CI-156	5-II -74	1330-1334	23^0 43' N	76^0 50" W	TOTO
CI-157	5-II -74	1314	23^0 39' N	76^0 49' W	TOTO
CI-159	5-II -74	1339-1352	23^0 39' N	76^0 50' W	TOTO
CI-160	6-II -74	1360-1364	23^0 40' N	77^0 03' W	TOTO
CI-161	6-II -74	1364-1370	23^0 40' N	77^0 06' W	TOTO
CI-163	6-II -74	1342-1348	23^0 33' N	77^0 10' W	TOTO
CI-164	6-II -74	1372	23^0 45' N	77^0 13' W	TOTO
CI-165	7-II -74	1426-1435	24^0 03' N	77^0 22' W	TOTO
CI-166	7-II -74	1492-1516	24^0 18' N	77^0 25' W	TOTO

CI-167	7-II -74	1506-1523	23^0 38’ N	77^0 17’ W	TOTO
CI-168	7-II -74	1570-1584	24^0 27’ N	77^0 23’ W	TOTO
CI-169	7-II -74	1737-1748	24^0 35’ N	77^0 32’ W	TOTO
CI-171	8-II -74	1940-2074	24^0 46’ N	77^0 37’ W	TOTO
CI-172	8-II -74	2780-2891	25^0 17’ N	77^0 46’ W	(N) TOTO
CI-175	9-II -74	1701-1707	24^0 32’ N	76^0 18’ W	ES
CI-176	10- II -74	1632	24^0 39’ N	76^0 29’ W	ES
CI-178	10- II -74	1794	24^0 13’ N	76^0 06’ W	ES
CI-180	11- II -74	1200-1208	24^0 04’ N	76^0 13’ W	ES
CI-181	11- II -74	600-650	24^0 21’ N	76^0 26’ W	ES
CI-182	11- II -74	1758-1780	23^0 56’ N	75^0 58’ W	ES
CI-183	11- II -74	1801-1814	23^0 45’ N	75^0 39’ W	ES
CI-184	11- II -74	2184-2193	23^0 55’ N	75^0 26’ W	ES
CI-185	12- II -74	1230-1240	23^0 54’ N	75^0 28’ W	ES
CI-187	12- II -74	1880-1895	24^0 00’ N	75^0 49’ W	ES
CI-189	13- II -74	500	24^0 05’ N	75^0 49’ W	ES
CI-190	13- II -74	225	24^0 05’ N	75^0 47’ W	ES
CI-191	13- II -74	1779-1840	24^0 10’ N	75^0 56’ W	ES
CI-192	13- II -74	1760-1776	24^0 21’ N	75^0 59’ W	ES
CI-193	13- II -74	1739-1756	24^0 25’ N	76^0 11’ W	ES
CI-194	13- II -74	400-550	24^0 42’ N	76^0 03’ W	(N) ES
CI-197	17- II -74	1659-1670	23^0 36’ N	86^0 06’ W	S of FL
CI-198	17- II -74	1315-1500	23^0 37’ N	82^0 15’ W	S of FL
CI-199	18- II -74	1543-1582	23^0 37’ N	82^0 15’ W	S of FL
CI-200	18- II -74	130-135	23^0 36’ N	81^0 55’ W	S of FL
CI-202	18- II -74	37-50	24^0 07’ N	82^0 38’ W	S of FL
CI-203	19- II -74	500-550	23^0 38’ N	81^0 13’ W	S of FL
CI-204	19- II -74	900-950	23^0 37’ N	81^0 10’ W	S of FL
CI-206	19- II -74	80	23^0 44’ N	81^0 22’ W	S of FL
CI-208	20- II -74	50	23^0 47 N	81^0 25’ W	S of FL
CI-209	20- II -74	550-625	23^0 46’ N	81^0 29’ W	S of FL
CI-214	20- II -74	125	24^0 24’ N	80^0 26’ W	S of FL
CI-218	21- II -74	430-455	24^0 47’ N	79^0 59’ W	S of FL
CI-219	21- II -74	450	24^0 57’ N	79^0 44’ W	S of FL
CI-221	21- II -74	125	25^0 05’ N	79^0 23’ W	S of FL
CI-224	22- II -74	105-180	24^0 58’ N	79^0 19’ W	S of FL
CI-225	22- II -74	70-250	24^0 15’ N	79^0 23’ W	W GBB
CI-227	22- II -74	600-700	24^0 29’ N	79^0 49’ W	S of FL
CI-228	22- II -74	250-260	24^0 37’ N	79^0 58’ W	S of FL
CI-230	23- II -74	50-100	24^0 53’ N	80^0 09’ W	S of FL
CI-233	23- II -74	625-750	25^0 21’ N	79^0 32’ W	S of FL
CI-234	23- II -74	500	25^0 23’ N	79^0 47’ W	S of FL
CI-240	26- II -74	325-345	26^0 45’ N	79^0 07’ W	NW GBI
CI-246	29-IX -74	743-761	26^0 22’ N	79^0 37’ W	S of FL
CI-249	31-IX -74	1372	23^0 48’ N	77^0 03’ W	TOTO
CI-250	31-IX -74	1277-1305	23^0 52’ N	76^0 52’ W	TOTO

CI-251	31-IX -74	1315	23^0 41’ N	76^0 45’ W	TOTO
CI-252	1- XI -74	1322-1332	23^0 39’ N	76^0 45’ W	TOTO
CI-253	1- XI -74	1328-1337	23^0 44’ N	76^0 49’ W	TOTO
CI-256	1- XI -74	1360	23^0 37’ N	77^0 06’ W	TOTO
CI-257	1- XI -74	50	23^0 43’ N	77^0 08’ W	TOTO
CI-258	2- XI -74	1359-1360	23^0 39’ N	77^0 03’ W	TOTO
CI-260	2- XI -74	1355-1357	23^0 35’ N	77^0 08’ W	TOTO
CI-261	2- XI -74	1351-1355	23^0 36’ N	77^0 08’ W	TOTO
CI-264	3- XI -74	1335-1362	23^0 53’ N	77^0 09’ W	TOTO
CI-268	4- XI -74	1487-1492	24^0 31’ N	77^0 23’ W	TOTO
CI-269	4- XI -74	1430-1440	24^0 28’ N	77^0 23’ W	TOTO
CI-270	4- XI -74	1538-1561	24^0 23’ N	77^0 26’ W	TOTO
CI-271	4- XI -74	1481-1502	24^0 17’ N	77^0 26’ W	TOTO
CI-274	7- XI -74	1701	24^0 32’ N	76^0 17’ W	ES
CI-279	8- XI -74	1823-1853	23^0 50’ N	75^0 50’ W	ES
CI-280	8- XI -74	2347-2360	23^0 52’ N	75^0 16’ W	ES
CI-281	8- XI -74	2113-2169	23^0 54’ N	75^0 30’ W	ES
CI-282	9- XI -74	1902-1908	24^0 00’ N	75^0 47’ W	ES
CI-287	10-XI -74	1741-1748	24^0 22’ N	76^0 01’ W	ES
CI-288	11-XI -74	2830-2911	25^0 16’ N	77^0 43’ W	NE PCh
CI-299	2- IV -75	1762-1794	24^0 39’ N	77^0 33’ W	TOTO
CI-300	3- IV -75	1360-1372	23^0 55’ N	77^0 14’ W	TOTO
CI-301	3- IV -75	1269-1304	23^0 52’ N	76^0 52’ W	TOTO
CI-302	3- IV -75	1452-1465	24^0 11’ N	77^0 23’ W	TOTO
CI-303	4- IV -75	1389-1390	23^0 56’ N	77^0 19’ W	TOTO
CI-305	4- IV -75	1346-1365	23^0 44’ N	76^0 51’ W	TOTO
CI-306	4- IV -75	1379-1408	24^0 06’N	77^0 18’W	TOTO
CI-307	5- IV -75	1307-1321	23^0 31’ N	76^0 57’ W	TOTO
CI-311	6- IV -75	1353-1360	23^0 38’ N	77^0 14’ W	TOTO
CI-312	6- IV -75	1348	23^0 36’ N	77^0 11’ W	TOTO
CI-315	7- IV -75	1517-1533	24^0 30’ N	77^0 22’ W	TOTO
CI-316	7- IV -75	1551-1567	24^0 24’ N	77^0 27’ W	TOTO
CI-317	7- IV -75	1554-1474	24^0 16’ N	77^0 20’ W	TOTO
CI-319	8- IV -75	1282-1295	23^0 33’ N	76^0 45’ W	TOTO
CI-320	8- IV -75	1319-1326	23^0 41’ N	76^0 43’ W	TOTO
CI-323	9- IV -75	1362-1364	23^0 40’ N	77^0 08’ W	TOTO
CI-324	9- IV -75	1333	23^0 31’ N	76^0 57’ W	TOTO
CI-325	9- IV -75	1311-1342	23^0 52’ N	76^0 57’ W	TOTO
CI-329	10- IV-75	1390	24^0 11’ N	77^0 18’ W	TOTO
CI-331	12- IV-75	1673-1682	24^0 32’ N	76^0 17’ W	ES
CI-332	12- IV-75	1624-1630	24^0 39’ N	76^0 27’ W	ES
CI-336	13- IV-75	1846-1851	23^0 48’ N	75^0 46’ W	ES
CI-340	15- IV-75	1746-1750	24^0 20’ N	76^0 00’ W	ES
CI-346	17- IV-75	2419-2426	22^0 55’ N	75^0 17’ W	CB
CI-351	20- IV-75	1509-1529	24^0 19’ N	77^0 21’ W	(N)TOTO
CI-353	21- IV-75	2977-3087	25^0 16’ N	$77^0$39’ W	S NE PCh.

CI-354	19-VIII-75	1707-1742	24^0 34’ N	77^0 31’ W	TOTO
CI-355	20-VIII-75	1287-1351	24^0 10’ N	77^0 18’ W	TOTO
CI-356	20-VIII-75	1547-1561	24^0 23’ N	77^0 26’ W	TOTO
CI-357	20-VIII-75	1385-1388	23^0 55’ N	77^0 17’ W	TOTO
CI-358	20-VIII-75	1334-1352	23^0 38’ N	77^0 14’ W	TOTO
CI-360	21-VIII-75	1334-1342	23^0 38’ N	76^0 49’ W	TOTO
CI-361	21-VIII-75	1296-1304	23^0 30’ N	76^0 55’ W	TOTO
CI-365	22-VIII-75	1372	23^0 50’ N	77^0 14’ W	TOTO
CI-366	22-VIII-75	1360-1372	23^0 49’ N	77^0 06’ W	TOTO
CI-368	23-VIII-75	1342-1352	23^0 42’ N	76^0 52’ W	TOTO
CI-370	23-VIII-75	1267-1296	23^0 34’ N	76^0 43’ W	TOTO
CI-374	24-VIII-75	2908-3012	25^0 16’ N	77^0 42’ W	NE PCh
CI-375	24-VIII-75	3050	25^0 16’ N	77^0 37’ W	NE PCh
CI-376	26-VIII-75	1758-1767	23^0 55’ N	75^0 59’ W	ES
CI-377	26-VIII-75	1917	24^0 00’ N	75^0 46’ W	ES
CI-378	27-VIII-75	1746-1776	24^0 21’ N	76^0 04’ W	ES
CI-379	27-VIII-75	1645-1673	24^0 33’ N	76^0 17’ W	ES
CI-380	27-VIII-75	1635-1644	24^0 39’ N	76^0 26’ W	ES
CI-382	28-VIII-75	1763	23^0 57’ N	76^0 01’ W	ES
CI-383	28-VIII-75	1817-1844	23^0 50’ N	75^0 49’W	ES
CI-384	28-VIII-75	1844	24^0 09’ N	76^0 55’W	ES
CI-386	29-VIII-75	1917-1926	23^0 59’ N	75^0 46’ W	ES
CI-387	29-VIII-75	1758-1765	24^0 16’ N	76^0 16’ W	ES
CI-388	29-VIII-75	2133-2160	23^0 56’ N	75^0 32’ W	ES
CI-392	31-VIII-75	2241-2259	22^0 48’ N	75^0 38’ W	CB
CI-395	1- IX -75	2681-2690	22^0 01’ N	75^0 04’ W	CB
CI-399	2- IX -75	2577	22^0 29’ N	75^0 11’ W	CB
CI-400	3- IX -75	2681	21^0 59’ N	75^0 06’ W	CB
CI-402	4- IX -75	2398-2409	22^0 53’ N	75^0 27’ W	CB
CI-405	28-II- 76	1426-1502	24^0 28’ N	77^0 20’ W	TOTO
CI-407	29- II -76	1329-1342	23^0 53’ N	77^0 05’ W	TOTO
CI-409	29- II -76	1292-1301	23^0 37’ N	76^0 43’ W	TOTO
CI-410	29- II -76	1323	23^0 30’ N	76^0 51’ W	TOTO
CI-413	1- III- 76	1372	23^0 51’ N	77^0 13’ W	TOTO
CI-314	1- III -76	1360	23^0 40’ N	76^0 59’ W	TOTO
CI-415	1- III -76	1333-1342	23^0 33’ N	77^0 04’ W	TOTO
CI-417	2- III -76	1385-1389	23^0 52’ N	77^0 16’ W	TOTO
CI-418	2- III -76	1381-1390	23^0 50’ N	77^0 17’ W	TOTO
CI-425	4- III -76	2501-2537	25^0 16’ N	77^0 52’ W	NE PCh.
CI-426	4- III -76	2651-2752	25^0 16’ N	77^0 49’ W	NE PCh.
CI-427	4- III -76	250-350	25^0 09’ N	77^0 21’ W	NE NPI
CI-428	5- III -76	1953-2001	24^0 49’ N	77^0 41’ W	TOTO
CI-429	6- III -76	1833-1862	24^0 42’ N	77^0 37’ W	TOTO
CI-431	6- III -76	1474-1483	24^0 16’ N	77^0 22’ W	TOTO
CI-432	6- III -76	1408-1422	24^0 02’ N	77^0 21’ W	TOTO
CI-435	9- III -76	1375-1384	23^0 50’ N	77^0 16’ W	TOTO

CI-436	9- III -76	1350-1360	23^0 36' N	77^0 04' W	TOTO
CI-437	9- III -76	1333	23^0 32' N	76^0 52' W	TOTO
CI-440	10- III -76	1221-1351	24^0 10' N	77^0 17' W	TOTO

Table 3: Areas Investigated by the R/V "*Columbus Iselin*"

	Latitude range	Longitude range	Depth range
Bahamas Region	21^0 59' N [75^0 06 W] 26^0 45' N [79^0 07 W]	75^0 04' W [22^0 01 N] 79^0 23' W [240 15 N]	50 m [23^0 43' N 77^0 08' W] 2830-2911 m [250 16' N 770 43' W]
Straits of Florida	23^0 56' N [81^0 55W] 26^0 75' N [79^0 46' W]	79^0 19' W [24^0 58'N] 82^0 38' W [24^0 07' N]	37-50 m. [24^0 07' N - 82^0 38' W] 1659-1670 m [23^0 36' N - 82^0 06' W]

Tabla 4. Number of stations in sampling areas where species were collected by the R/V "Columbus Iselin" on the Bahamas Region and Straits of Florida 1972-1976.

	Columbus Basin	Exuma Sound	Tonque of the Ocean	Northeast Providence Channel	New Providence Id.	Grand Bahama Id	Great Bahama Bank	Straits of Florida	Total # of Stations	Total # of Specimens
Aristeidae										
Aristaeopsis edwardsiana	-----	-----	2	-----	-----	-----	-----	------	2	5
Aristeus antillensis	-----	-----	-----	-----	-----	-----	(NE) 1	-----	1	1
Hemipenaeus carpenteri	3	12	14	2	-----	-----	-----	-----	31	44
Hemipenaeus spinidorsalis	-----	2	3	-----	-----	-----	-----	-----	5	11
Hepomadus tener	1	3	17	3	-----	-----	-----	-----	24	27
Plesiopenaeus armatus	2	2	2	(3S) 4	-----	-----	-----	-----	10	25
Plesiopenaeus coruscans	2	2	10	-----	(NE) 1	-----	-----	-----	15	16
Benthesicymidae										
Benthesicymus bartletti	3	22	103	3	(2NE) 4	(NW) 1	(W) 1	1	138	467
Benthesicymus carinatus	-----	1	10	2	-----	-----	-----	1	14	26
Benthesicymus cf. cereus	1	13	2	(1S) 2	-----	-----	-----	-----	18	70
Benthesicymus cf. crenatus	-----	-----	3	-----	-----	-----	-----	1	4	26
Gennadas bouvieri	-----	-----	1	-----	-----	-----	-----	3	4	17
Gennadas capensis	-----	1	-----	1	-----	-----	-----	1	3	4
Gennadas valens	-----	(1NE)3	1	-----	-----	-----	-----	3	7	9
Penaeidae										
Funchalia villosa	-----	1	1	-----	-----	-----	-----	2	4	4
Parapenaeus americanus	-----	-----	-----	-----	-----	(S;NW) 2	(NW) 1	-----	3	33

Solenoceridae										
Hadropenaeus affinis	-----	-----	-----	-----	-----	-----	(NW) 1	-----	1	4
Hymenopenaeus aphoticus	-----	12	40	-----	-----	-----	-----	1-	53	173
Hymenopenaeus laevis	-----	2	-----	-----	-----	-----	-----	-----	2	4
Mesopenaeus tropicalis	-----	-----	-----	-----	-----	-----	(NW) 1	-----	1	5
Pleoticus robustus	-----	-----	-----	-----	-----	-----	-----	2	2	8
Sergestidae										
Sergestes armatus	-----	2	1	1	-----	-----	-----	2	6	12
Sergestes atlanticus	-----	1	-----	-----	-----	-----	-----	4	5	5
Sergestes corniculum	-----	-----	1	-----	-----	-----	-----	-----	1	1
Sergestes curvatus	-----	1	2	2	-----	-----	-----	1	6	9
Sergestes diapontius	-----	-----	1	-----	-----	-----	-----	3	4	6
Sergestes edwardsi	-----	-----	-----	1	-----	-----	-----	2	3	3
Sergestes cf. halia	-----	(N) 1	-----	-----	-----	-----	-----	-----	1	1
Sergestes henseni	-----	1	2	-----	-----	-----	-----	2	5	5
Sergestes cf. nudus	-----	-----	1	-----	-----	-----	-----	-----	1	1
Sergestes paraseminudus	-----	1	4	-----	-----	-----	-----	6	11	38
Sergestes pectinatus	-----	-----	-----	-----	-----	-----	-----	2	2	3
Sergestes sargassi	-----	1	3	-----	-----	-----	-----	-----	4	6
Sergestes vigilax	-----	-----	-----	-----	-----	-----	-----	1	1	3
Sergia creber	-----	-----	1	-----	-----	-----	-----	4	5	7
Sergia grandis	-----	1 (NE) 12	22	2	-----	-----	-----	4	40	50
Sergia mollis	-----	1	1	-----	-----	-----	-----	-----	2	2
Sergia regalis	-----	(NE) 1	-----	-----	-----	-----	-----	-----	1	2
Sergia splendes	-----	(1NE) 5	3	2	-----	-----	-----	8	18	129
Sergia tenuiremis	-----	-----	1	-----	-----	-----	-----	-----	1	1
Sergia wolffi	-----	-----	4	-----	-----	-----	-----	2	6	6

Table 5. Bathymetric distribution of species collected by the R/V "Columbus Iselin" on the Bahamas Region and Straits of Florida 1972-1976

Species Name	Number Stations	Number. speciments	Depth range	Sampling Area	Stations
ARISTIDAE *Aristaeopsis edwardsiana* (Johnson, 1867)	2	5	658-666 ---- 1390 m	TOTO	CI- 329, 1390 m; CI-358, 1334-1352 m
Aristeus antillensis A. Milne Edwards and Bouvier, 1909	1	1	658-666 m	NE G.B.B.	CI-27, 658-666 m
Hemipenaeus carpenteri Wood Mason, 1891	31	44	225 ---- 2780-2891 m	C. B 3 E. S. 12 TOTO 14 NE P Ch 2	CI-73, 1792 m; CI-76, 1582-1591 m; CI-85, 1510-1545 m; CI-103, 1423-1450 m; CI-106, 1261-1311 m; CI-110, 1364 m; CI-126, 1860-1884 m; CI-150, 1355-1360 m; CI-160, 1360-1364 m; CI-167, 1506-1523 m; CI-168, 1570-1584 m; CI-169, 1737-1748 m, CI-171, 1940-2074 m; CI-172, 2780-2891 m; CI-178, 1794 m; CI-183, 1801-1814 m; CI-184, 2184-2193 m; CI- 190, 225 m; CI-192, 1760-1776 m; CI-193, 1739-1756 m; CI-253, 1328-1337 m; CI-274, 1701 m; CI-279, 1823-1853 m; CI-331, 1673-1682 m; CI-346, 2419-2426 m; CI-354, 1707-1742 m; CI-387, 1758-1765 m; CI-399, 2577m; CI-402, 2398-2409 m; CI-426, 2651-2752 m; CI-431, 1474-1483 m.
Hemipenaeus spinidorsalis Bate, 1881	5	11	1287-1351 ---- 2074 m	E. S. 2 TOTO 3	CI-171, 1940-2074 m; CI-176, 1632 m; CI-183, 1801-1814 m; CI-323, 1362-1364 m; CI-355, 1287-1351 m.
Hepomadus tener Smith, 1884	24	27	1261-1302 - 2977-3087 m	CB. 1 E.S 3 TOTO 17 NE P Ch 3	CI-57, 1400-1409 m; CI-85, 1510-1545 m; CI-103, 1423-1450 m; CI-106, 1261-1311 m; CI-113, 1368 m; CI-159, 1339-1352 m; CI-165, 1426-1435 m; CI-167, 1506-1523 m; CI-182 1758-1780 m; CI-192, 1760-1776 m; CI-316, 1551-1567 m; CI-324, 1333 m; CI-353, 2977-3087 m; CI-355, 1287-1351 m; CI-360, 1334-1342 m; CI-365, 1372 m; CI-370, 1267-1296 m; CI-378, 1746-1776 m; CI-400, 2681 m; CI- 407, 1329-1342 m; CI-414, 1360 m; CI- 425, 2501-2537; CI- 426,

					2651-2752 m; CI- 437, 1333 m. This species was collected at a depth of 4031 m by the R/V "Pillsburry" on station 1426 at 20^0 59' N, 72^0 27' W
Plesiopenaeus armatus (Bate, 1881)	10	25	750-850 ---- 3219-3237 m	CB 2 E S 2 TOTO 2 NE PCh (3 S) 4	CI-33, 3219-3227 m; CI-45, 780-850 m; CI-172, 2780-2891 m; CI-280, 2347-2360 m; CI-346, 2419-2426 m; CI-353, 2977-3087 m; CI-361, 1296-1304 m; CI-377, 1917 m; CI-392, 2241-2259 m; CI-426, 2651-2752 m.
Plesiopenaeus coruscans (Wood-Mason, 1891)	15	16	250-350 ---- 2241-2259 m	C B 2 E S 2 TOTO 10 NE NPI 1	CI-150, 1355-1360 m; CI-153, 1313-1314 m; CI-163, 1342-1348 m; CI-167, 1506-1523 m; CI-192, 1760-1776 m, CI-258, 1359-1360 m; CI-311, 1353-1360 m; CI-331, 1673-1682 m; CI-370, 1267-1296 m; CI-392, 2241 -2259 m; CI-402, 2398-2409 m; CI-409, 1292-1301 m; CI-417, 1385-1389 m; CI-427, 250-350 m; CI-437, 1333 m.

BENTHESICYMIDAE *Benthesicymus bartletti* Smith, 1882	138	467	50 -- 2908 – 3012 m.	C B 3 E S 22 TOTO 103 NE PCh 3 NPI (2NE) 4 GBI (NW) 1 GBB (W) 1 S of Fl 1	CI-9, 1318-1329 m; CI-11, 1170-1180 m; CI-12, 1290-1302 m; CI-14, 1246-1371 m; CI-22, 485-612 m; CI-24, 1710-1719 m; CI-32, 3017-3045 m; CI-36, 290 m; CI-37, 512-540 m; CI-40, 1307-1317 m; CI-42, 1298 m; CI-46, 1234-1280 m; CI-48, 1390 m; CI-51, 1290 m; CI-54, 1298-1335 m; CI-55, 1353 m; CI-57, 1400-1409 m; CI-69, 1100 m; CI-72, 1884 m; CI-75, 1737 m; CI-84, 741-805 m; CI-85, 1510-1545 m; CI-97, 2679-2816 m; CI-101, 1584-1604 m; CI-103, 1423-1450 m; CI-106, 1261-1311 m; CI-114, 1334-1342 m; CI-115, 1307-1324 m; CI-122, 1428-1439 m; CI 125, 1485-1507 m; CI-126, 1860-1884 m; CI-143, 1754-1856 m; CI-144, 1483-1506 m; CI-145, 1430-1447 m; CI-147, 1337-1378 m; CI-148, 1333-1379 m; CI-149, 1387-1390 m; CI-150, 1355-1360 m; CI-151, 1301-1315 m; CI-153, 1313-1314 m; CI-154, 1311 m; CI-156, 1330-1334 CI-159, 1339-1352 m; CI-160, 1360-1364 m; CI-161, 1364-1370; CI-163, 1342-1348 m; CI-164, 1372 m; CI-167, 1506-1523 m; CI-168, 1570-1584 m; CI-169, 1737-1748 m; CI-175, 1701-1707 m; CI-176, 1632 m; CI-178, 1794 m; CI-183, 1801--1814 m; CI-184, 2184-2193 m; CI-187, 1880-1895 m; CI-191, 1779-1840 m; CI-192, 1760-1776 m; CI-203, 500-550 m; CI-225, 70-250 m; CI-240, 325-345 m; CI-250, 1277-1305 m; CI-251, 1315 m;CI-252, 1322-1332 m; CI-253, 1328-1337 m; CI-256, 1360 m; CI-257, 50 m; CI-260, 1355-1357 m; CI-261, 1351-1355 m; CI-268, 1487-1492 m; CI-269, 1430-1440 m; CI-270, 1538-1561 m; CI-274, 1701 m; CI-280, 2347-2360 m; CI-282, 1902-1908 m; CI-287, 1741-1748 m; CI-300, 1360--1372 m; CI-301, 1269-1304 m; CI-302, 1452-1465 m; CI-303, 1389-1390 m; CI-307, 1307-1321 m; CI-311, 1353-1360 m; CI-312, 1348 m; CI-316, 1551-1567 m; CI-317, 1554-1474 m; CI-319, 1282-1295 m; CI-320, 1319-1326 m; CI-323, 1362-1364 m; CI-324, 1333 m; CI-325, 1311-1342 m; CI-329, 1390 m; CI-332, 1624-1630 m; CI-336, 1846-1851 m; CI-340, 1746-1750 m; CI-351, 1509-1529 m; CI-354, 1707-1742 m; CI-355, 1287-1351 m; CI-356, 1547-1561 m; CI-357, 1385-1388 m; CI-358, 1334-1352 m; CI-360, 1334-1342 m; CI-361, 1296-1304 m; CI-365, 1372 m;

					CI-366, 1360-1372 m; CI- 368, 1342-1352 m; CI-370, 1267-1296 m; CI-374, 2908-3012 m; CI-376, 1758-1767 m; CI-379, 1645-1673 m; CI-380, 1635-1644 m; CI-382, 1763 m; CI-387, 1758-1765 m; CI-392, 2241-2259 m; CI-395, 2681-2690 m; CI-402, 2398-4009 m; CI-405, 1426-1502 m; CI-407, 1329-1342 m; CI-413, 1372 m;,CI-415, 1333-1342 m; CI-417, 1385-1389 m; CI-418, 1381-1390 m; CI-427, 250-350 m; CI-428, 1953-2001 m; CI-429, 1833-1862 m; CI-431, 1474-1483 m; CI-435, 1375-1384 m; CI-436, 1350-1360 m; CI-437, 1333 m; CI-440, 1221-1351 m.
Benthesicymus carinatus Smith, 1884	14	26	1350-1360 - 2651-2752 m	ES 1 TOTO 10 NE PCh 2 S of FL 1	CI-101, 1584-1604 m; CI-113, 1368 m; CI-122, 1428-1439 m; CI-144, 1483-1506 m; CI-197, 1659-1670 m; CI-351, 1509-1529 m; CI-357, 1385-1388 m; CI-365, 1372 m; CI-379, 1645-1673 m; CI- 413, 1372 m; CI-418, 1381-1390 m; CI-425, 2501-2537 m; CI-426, 2651-2752 m; CI-436, 1350-1360 m.
Benthesicymus cf cereus Burkenroad, 1936	18	70	1389-1390 ---- 2830-2911 m	CB 1 ES 13 TOTO 2 NE PCh (1S) 2	CI-70, 1673-1682 m; CI-72, 1884 m; CI-73, 1792 m; CI-75, 1737 m; CI-78, 1682-1701 m; CI-144, 1483-1506 m; CI-175, 1701-1707 m; CI-183, 1801-1814 m; CI-184, 2184-2193 m; CI-187, 1880-1895 m; CI-193, 1739-1756 m; CI-281, 2113 -2169 m; CI-288, 2830-2911 m; CI-303, 1389-1390 m; CI-386, 1917-1926 m; CI-388, 2133-2160 m; CI-400, 2681 m; CI-426, 2651-2752 m.
Benthesicymus cf crenatus Bate, 1881	4	26	1319-1326 ---- 1659-1670 m	TOTO 3 S of FL 1	CI-144, 1483-1506 m; CI-197, 1659-1679 m; CI-305, 1346-1365 m; CI-320, 1319-1326 m.

Gennadas bouvieri Kemp, 1909	4	17	550-625 -- 900-950 m	TOTO 1 S of FL 3	CI-52, 850 m; CI-204, 900-950 m; CI-209, 550-625 m; CI-233, 625-750 m.
Gennadas capensis Calman, 1925	3	4	550-625 ---- 12003-12085 m	ES 1 NE PCh 1 S of FL 1	CI-98, 900-920 m; CI-180, 1200-1208 m; CI-209, 550-625 m.
Gennadas valens (Smith, 1884)	7	9	37-50 ---- 3244-3394 m	ES 3 TOTO 1 S of FL 3	CI-89, 1938-1966 m; CI-180, 1200-1208 m; CI-189, 500 m; CI-194, 400-550 m; CI-197, 1659-1670 m; CI-202, 37-50 m; CI-209, 550-625 m.
Plesiopenaeus coruscans (Wood-Mason, 1891)	15	16	250-350 --- 2241-2259 m	CB 2 ES 2 TOTO 10 NPI (NE) 1	CI-150, 1355-1360 m; CI-153, 1313-1314 m; CI-163, 1342-1348 m; CI-167, 1506-1523 m; CI-192, 1760-1776 m, CI-258, 1359-1360 m; CI-311, 1353-1360 m; CI-331, 1673-1682 m; CI-370, 1267-1296 m; CI-392, 2241 -2259 m; CI-402, 2398-2409 m; CI-409, 1292-1301 m; CI-417, 1385-1389 m; CI-427, 250-350 m; CI-437, 1333 m.
Benthesicymus carinatus Smith, 1884	14	26	1350-1360 ---- 2651-2752 m	ES 1 TOTO 10 NE PCh 2 S of FL 1	CI-101, 1584-1604 m; CI-113, 1368 m; CI-122, 1428-1439 m; CI-144, 1483-1506 m; CI-197, 1659-1670 m; CI-351, 1509-1529 m; CI-357, 1385-1388 m; CI-365, 1372 m; CI-379, 1645-1673 m; CI- 413, 1372 m; CI-418, 1381-1390 m; CI-425, 2501-2537 m; CI-426, 2651-2752 m; CI-436, 1350-1360 m.

Benthesicymus cf crenatus Bate, 1881	4	26	1319-1326 ---- 1659-1670 m	TOTO 3 S of FL 1	CI-144, 1483-1506 m; CI-197, 1659-1679 m; CI-305, 1346-1365 m; CI-320, 1319-1326 m.
Gennadas valens (Smith, 1884)	7	9	37-50 ---- 3244-3394 m	ES 3 TOTO 1 S of FL 3	CI-89, 1938-1966 m; CI-180, 1200-1208 m; CI-189, 500 m; CI-194, 400-550 m; CI-197, 1659-1670 m; CI-202, 37-50 m; CI-209, 550-625 m.
PENAEIDAE *Funchalia villosa* (Bouvier, 1905)	4	4	250-260 ---- 1298-1399 m	ES 1 TOTO 1 S of FL 2	CI-20, 1298-1399 m; CI-185, 1230-1240 m; CI 228, 867 m; CI-233, 500 m.
Parapenaeus americanus Rathbun	3	33	325-345 ---- 448-466 m	GBI (S; NW) 2 GBB (NW) 1	CI-138, 448-466 m; CI-139, 353-358 m; CI-240, 325-345 m.
SOLENOCERIDAE *Hadropenaeus affinis* (Bouvier, 1906)	1	4	353-358 m	GBB (NW) 1	CI-139, 353-358 m.
Hymenopenaeus aphoticus Burkenroad, 1936	53	173	1234-1280 - 2184-2193 m	ES 12 TOTO 40 S of FL 1	CI-40, 1307-1317 m; CI-41, 1298 m; CI-46, 1234-1280 m; CI-51, 1290 m; CI-54, 1298-1335 m; CI-57, 1400-1409 m; CI-60, 1536-1545 m; CI-76, 1582-1591 m; CI-85, 1510-1545 m; CI-103, 1423-1450 m; CI-106, 1261-1311 m; CI-110, 1364 m; CI-122, 1428-1439 m; CI 125, 1485-1507 m; CI-144, 1483-1506 m; CI-145, 1430-1447 m; CI-149, 1387-1390 m; CI-151, 1301-1315 m; CI-154, 1311 m; CI-159, 1339-1352 m; CI-163, 1342-1348 m; CI-168, 1570-1584 m; CI-169, 1737-1748 m, CI-175, 1701-1707 m; CI-182, 1758-1780 m; CI-184, 2184-2193 m; CI-191, 1779-1840 m; CI-192, 1760-

					1776 m; CI-193, 1739-1756 m; CI-197, 1659-1670 m; CI-252, 1322-1332 m; CI-261, 1351-1355 m; CI-269, 1430-1440 m; CI-299, 1762-1794 m; CI-305, 1346-1365 m; CI-306, 1379-1408 m; CI-307, 1307-1321 m; CI-315, 1517-1533 m; CI-320, 1319-1326 m; CI-323, 1362-1364 m; CI-324, 1333 m; CI 329, 1390 m;CI-340, 1746-1750 m; CI-354, 1707-1742 m; CI-356, 1547-1561 m; CI-365, 1372 m; CI-370, 1267-1296 m; CI-379, 1645-1673 m; CI-382, 1763 m; CI-383, 1817-1844 m; CI-387, 1758-1765 m; CI-407, 1329-1342 m; CI-414, 1360 m; CI-432, 1408-1422 m.
Hymenopenaeus laevis (Bate, 1981)	2	4	1779-1840 - 2184-2193 m	ES 2	CI-184, 2184-2193 m; CI- 191, 1779-1840 m. This species was previously collected at a depth of 5182 m by the R/V at "Pillsbury" on station 1376, 20^0 45' W, 65^0 01'W
Mesopenaeus tropicalis (Bouvier, 1905)	1	5	353-358 m	GBB (NW) 1	CI-139, 353-358 m.
Pleoticus robustus (Bouvier, 1905)	2	8	329-362 -- 743-761 m	S of FL (2 off Palm Beach) 3	CI-142, 329-362 m; CI-233, 625-750m; CI-246, 743-761 m.

SERGESTIDAE *Sergestes armatus* Kroyer, 1855	6	12	125- 2524-2615 m	ES 2 TOTO 1 NE PCh 1 S of FL 2	CI-90, 600-640 m; CI-96, cf 2524-2615 m; CI-189, 500 m; CI-194, 400-550 m; CI-200, 130-135 m, CI-214, 125 m.
Sergestes atlanticus H. Milne Edwards, 1830	5	5	50 -- 1200-1208 m	ES 1 S of FL 4	CI-180, 1200-1208 m; CI-200, 130-135 m; CI-208, 50 m; CI-209, 550-625 m; CI-233, 625-750 m.
Sergestes cornutus *(Króyer, 1855)*	1	1	1554-1573 m	TOTO 1	CI-21, 1554-1573 m
Sergestes curvatus Crosnier and Forest, 1973	6	9	34--- 3054-3164 m	ES 1 TOTO 2 NE PCh 2 S of FL 1	CI-25, 1948-2012 m; CI-31, 3054-3164 m; CI-56, cf 1380-1399 m; CI-64, 340 m; CI-133, 1000-1250 m; CI-234, 500 m.
Sergestes diapontius (Bate, 1881)	4	6	50 -- 1948-2012 m	TOTO 1 S of FL 3	CI-25, 1948-2012 m; CI-208, 50 m; CI-219, 450 m; CI-233, 625-750 m.
Sergestes edwardsi Krϕyer, 1855	3	3	50 ---- 900-920 m.	NE PCh 1 S of FL 2	CI-98, 900-920 m; CI-208, 50 m; CI-233, 625-750 m.
Sergestes cf halia Faxon, 1893	1	1	400-550 m	ES (N)1	CI-194, 400-550 m.

Sergestes hensni (Ordmann, 1893)	5	5	125 ---- 1380-1399 m	ES 1 TOTO 2 S of FL 2	CI-56, 1380-1399 m; CI-90, 600-640 m; CI-180, 1200-1208 m; CI-209, 550-625 m; CI-221, 125 m.
Sergestes cf nudus Illig, 1914	1	1	1938-1966 m	TOTO 1	CI-89, 1938-1966 m.
Sergestes paraseminudus Crosnier ans Forest, 1973	11	38	250-260 ---- 1492-1516 m	ES 1 TOTO 4 S of FL 6	CI-20, 1298-1399 m; CI-45, 780-850 m; CI-82, 1000 m; CI-166, cf 1492-1516 m; CI-189, 500 m; CI-200 cf, 130-135 m; CI-208, cf 50 m; CI-209, 550-625 m; CI-224, 105-180 m; cf CI-228, cf 250-260 m; CI-233, 625-750 m.
Sergestes pectinatus Sund, 1920	2	3	50-100 ---- 430-455 m	S of FL 2	CI-218, 430-455 m; CI-230, 50-100 m.
Sergestes sargassi Ortmann, 1893	4	6	600-640 ---- 1570-1584 m	ES 1 TOTO 3	CI-56, 1380-1399 m; CI-69, 1100 m; CI-90, 600-640 m; CI-168, 1570-1584 m.
Sergestes vigilax Stimpson, 1860	1	3	125 m	S of FL 1	CI-214, 125 m.
Sergia grandis (Sund, 1920)	40	50	350-425---- 3054-3164 m	ES (1NE) 12 TOTO 21 NE PCh 2 S of FL 4	CI-21, 1554-1573 m; CI-31, 3054-3164 m; CI-41, 1298 m; CI-45, 780-850 m; CI-63, 910 m; CI-64, 340 m; CI-69, 1100 m; CI-75, 1737 m; CI-85, 1510-1545 m, CI-89, 1938-1966 m; CI-90, 600-640 m; CI-103, 1423-1450 m; CI-118, 400-465 m; CI-119, 350-425 m; CI-122, 1428-1439 m; CI-140, 732-738 m; CI-149, 1387-1390 m; CI-180, 1200-1208 m; CI-181, 600-650 m; CI-184, 2184-2193 m; CI-189, 500 m; CI-193, 1739-1756 m; CI-194, 400-550 m; CI-198, 1315-1500 m; CI-199, 1543-1582 m; CI-233, 625-750 m; CI-

					249, 1372 m; CI-250, 1277-1305 m; CI-258, 1359-1360 m; CI-271, 1481-1502 m; CI-303, 1389-1390 m; CI-311, 1353-1360 m; CI-375, 3050 m; CI-354, 1707-1742 m; CI-378, 1746-1776 m; CI-384, 1844 m; CI-410, 1323 m; CI-415, 1333-1342 m; CI-432, 1408-1422 m.
Sergia mollis (Smith, 1840)	2	2	1200-1208 ---- 1554-1573 m	ES 1 TOTO 1	CI-21, 1554-1573 m; CI-180, 1200-1208 m.
Sergia regalis (Gordon, 1939)	6	9	400-550 m - 780-850 m	ES (NE) 1 TOTO 1 S of FL 4	CI-45, 780-850 m; CI-140, 732-738 m; CI-194, 400-550 m; CI-209, 550-625 m; CI-233, 625-750 m; CI-234, 500 m.
Sergia splendens (Sund, 1920)	18	129	125-------1938-1966 m	ES (IN) 5 TOTO 3 NE PCh 2 S of FL 8	CI-20, 1298-1399 m; CI-45, 780-850 m; CI-69 1100 m; CI-89, 1938-1966 m; CI-98, 900-920 m; CI-133, 1000-1250 m; CI-180, 1200-1208 m; CI-181, 600-650 m; CI-189, 500 m; CI-194, 400-550 m; CI-200, 130-135 m; CI-206, 80 m; CI-208, 50 m; CI-209, 550-625 m; CI-221, 125 m; CI-228, 250-260 m; CI-233, 625-750 m; CI-234, 500 m
Sergia tenuiremus (Krφyer, 1855)	1	1	1938-1966 m	TOTO 1	CI-89, 1938-1966 m.
Sergia wolffi Vereshchaka, 1994	6	6	125---- 1719-1746 m	TOTO 4 S of FL 2	CI-40, 1307-1317 m; CI-87, 1719-1746 m; CI-157, 1314 m; CI-197, 1659-1670 m; CI-221, 125 m; CI-264, 1335-1362 m.

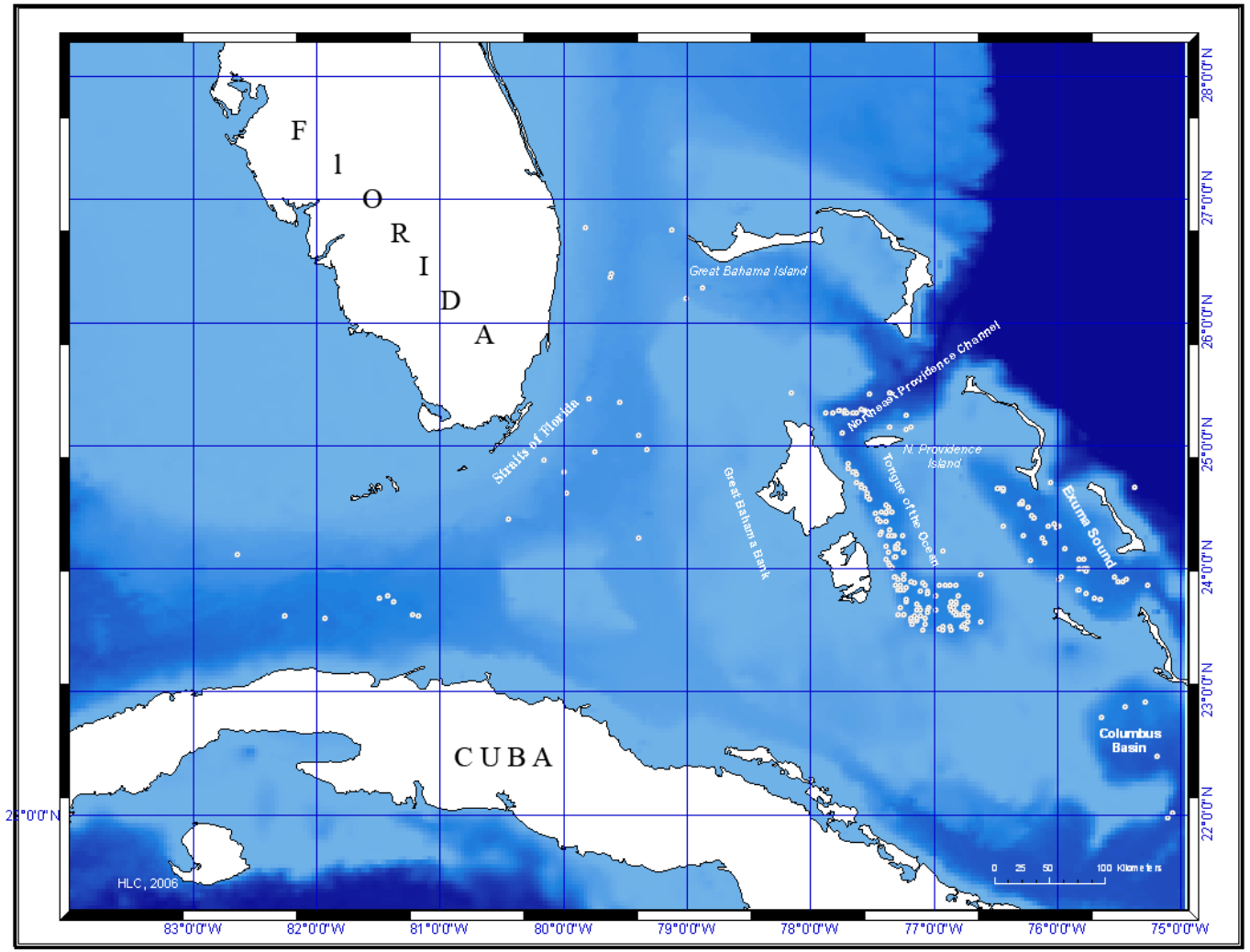

Fig. 1. Sampling area for Deep Sea Penaeoid and Sergestoid Shrimps collected by the R/V *Columbus Iselin* on the Bahamas Region. and Straits of Florida 1972-1976.