SCIENTIFIC MEETINGS OF THE ASSOCIATION OF MARINE LABORATORIES OF THE CARIBBEAN: ADVENTURES IN PARADISE
PART 1. PHYSICAL ATTRIBUTES

Lucy Bunkley-Williams
Department of Biology, University of Puerto Rico, P.O. Box 9012, Mayagüez, Puerto Rico 00861-9012 lwilliams@uprm.edu

Ernest H. Williams, Jr.
Department of Marine Sciences, University of Puerto Rico, P.O. Box 9013, Mayagüez, Puerto Rico 00861-9013 ewilliams@uprm.edu

The Association has initiated cooperative research projects, cooperative scientific cruises, and other projects among Institutional Members (IM). The most important one was the Caribbean Coastal Marine Productivity Programme (CARICOMP) (1982-) as pointed out by Ivan Goodbody (pers. comm.) at our 2003 31st Meeting in Trinidad. The next most important accomplishment of the Association has been to hold scientific meetings sponsored by our IMs. For the 50th Anniversary Meeting of the Association we presented a list of all the Scientific Meetings (Bunkley-Williams and Williams, 2007; Table 1). Someone or another will always need to know which meeting was where and hosted by whom. We looked these things up countless times in the old days. Now that the office of the Association moves around the Caribbean and history records are no longer kept, an accurate listing becomes even more important. Tracking down information on some of the more recent meetings was surprisingly difficult. Another reason to report and analyze the meeting information is that laboratories hosting new meetings often wish to consult what happen before for continuity, appropriateness, if not mere reassurance.

TABLE 1. ASSOCIATION OF MARINE LABORATORIES OF THE CARIBBEAN SCIENTIFIC MEETINGS.

No.	Country	Year	Dates	Hosting Marine Laboratory	City/Island
1	Puerto Rico	1957	31 Mar-6 Apr	Institute of Marine Biology University of Puerto Rico	La Parguera
2	Bermuda	1958	17-21 Sep	Bermuda Biological Station	St. George's
3	Jamaica	1960	12-14 Apr	University College of the West Indies	Kingston
4	Netherlands Antilles	1962	18-21 Nov	Caribbean Marine Biological Institute	Curaçao
5	Bahamas	1963	20-22 Jan	Lerner Marine Biological Laboratory	Bimini
6	Venezuela	1965	20-22 Jan	Margarita Station of Marine Investigation	Margarita
7	Barbados	1966	24-26 Aug	Bellairs Research Institute	St. James
8	Jamaica	1969	31 Aug-4 Sep	University of the West Indies	Kingston
0*	Panama	1970	12-15 Oct	Smithsonian Tropical Research Institute	Panama City

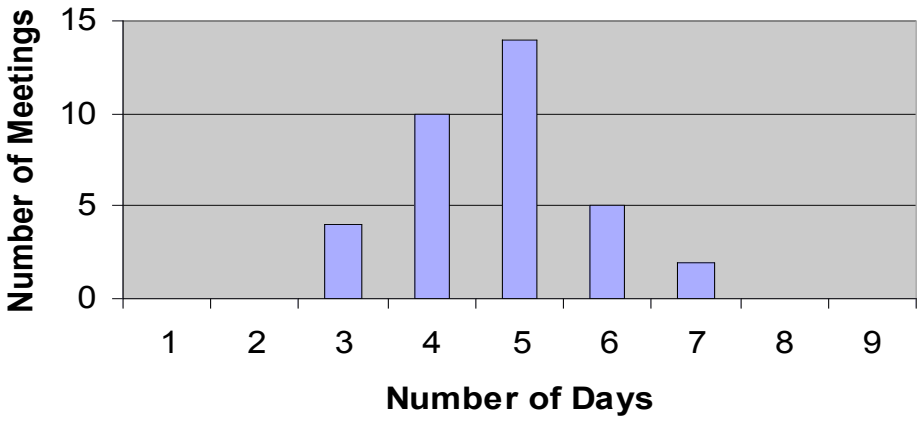
9	Venezuela	1971	11-15 Oct	Oceanographic Institute Universidad de Oriente	Cumaná
10	Puerto Rico	1973	4-7 Sep	Department of Marine Sciences University of Puerto Rico	Mayagüez
11	USVI	1975	2-5 May	West Indies Laboratory Fairleigh Dickinson University	St. Croix
12	Netherlands Antilles	1976	22-26 Sep	Caribbean Marine Biological Institute	Curaçao
13	Colombia	1977	10-14 Oct	Punta de Betín Institute of Marine Investigation	Santa Marta
14	Dominican Republic	1978	21-25 Oct	Institute of Marine Biology Universidad Autónoma de Santo Domingo	Santo Domingo
15	Jamaica	1980	7-10 Jan	University of the West Indies	Discovery Bay
16	Bermuda	1981	4-8 Sep	Bermuda Biological Station	St. George's
17	USA	1983	16-20 May	Rosenstiel School of Marine and Atmospheric Sciences, University of Miami	Miami, FL
18	Trinidad	1984	14-18 Jul	Institute of Marine Affairs	Port of Spain
19	USVI	1986	20-23 May	West Indies Laboratory Fairleigh Dickinson University	St. Croix
20	Colombia	1987	11-14 Aug	Punta de Betín Institute of Marine Investigation	Santa Marta
21	USA	1988	24-27 May	Mote Marine Laboratory	Sarasota, FL
22	Puerto Rico	1989	8-11 May	Department of Marine Sciences University of Puerto Rico	La Parguera
23	Cuba	1990	18-23 Jun	Congress of Science of the Sea II	Havana
24	Bahamas	1991	12-16 May	Caribbean Marine Research Center	Freeport
25	Panama	1992	17-22 Aug	Smithsonian Tropical Research Institute	Panama City
26	Bahamas	1994	11-16 Jun	Bahamian Field Station Gerace Research Center	San Salvador
27	USVI	1995	3-6 Jun	MacLean Marine Science Center	St. Thomas
28	Costa Rica	1997	20-25 Jul	Center for Marine Science and Limnology Investigations, University of Costa Rica	San Jose
29	Venezuela	1999	18-24 Jul	Oceanographic Institute Universidad de Oriente	Cumaná
30	Puerto Rico	2001	24-29 Jun	Department of Marine Sciences University of Puerto Rico	La Parguera
31	Trinidad	2003	14-18 Jul	Institute of Marine Affairs	Port of Spain
32	Netherlands Antilles	2005	13-17 Jun	Curaçao Sea Aquarium	Curaçao
33	USVI	2007	4-8 Jun	MacLean Marine Science Center	St. Thomas
34	Dominica	2009	25-29 May	Institute for Tropical Marine Ecology	Roseau

*This "Extraordinary Meeting" was not numbered. The perceived crisis of a sea level canal was the impetus for the meeting. USVI=U.S. Virgin Islands

LENGTH OF MEETINGS

The length of each meeting ranged from 3 to 7 days for a total of 161 days (averaged 4.7 with 5 as a mode; Graph 1). The shortest meetings were in the early days when there were fewer participants and papers presented. The 4-5 day lengths were the most popular representing 2/3s of the meetings. The longest two meetings naturally included the first, organizational one, where much had to be discussed. Some hosting laboratories placed field trips after their meetings, while others included field trips within their meeting dates. Thus the lengths of meetings may not be entirely comparable. For many years, the Executive Board business meetings were held during the scientific meeting dates. These brigands are now isolated from decent folk, during off years and the day before the scientific meetings begin, so they cannot cast a sober, business mood on anyone, and more of the meetings can be dedicated to science. This also had the positive effect of allowing room for longer and larger scientific sessions without increasing the number of days of the scientific meetings.

GRAPH 1. DURATION OF EACH SCIENTIFIC MEETING



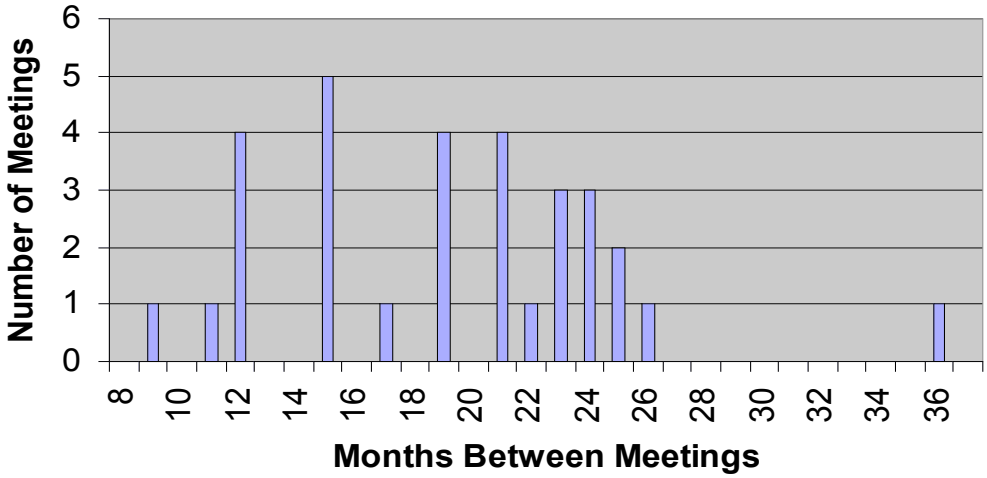
TIME BETWEEN MEETINGS

The distance between meetings has been as short as 9 months to as long as 3 years for an average of 1.36 years and a mode of 1.25 years (Graph 2). Nine months is a fine period of time to have a baby, but it is too brief of a period between scientific meetings. The 3 year lapse occurred between the 7th and 8th meeting and probably represented a period of crisis or indecision in the Association. We have been told that a similar crisis of faith occurred in the 1990s, but there is no evidence of it in the meeting cycle. The first 4 meetings were separated by 1 year and 7 months each. This is too odd and too precise a period to be a coincident. The Founding Fathers must have thought this represented the ideal time period between meetings [Probably based on the piles of 19 prehistoric aboriginal spherical marker-stones on Magueyes Island signifying the number of moons between council meetings]. This timing broke down between the 4th and 5th

and 5th and 6th meetings, but returned once again between the 6th and 7th ones, only to never be used again. Have we abandoned the guidance and wisdom of the Founders?

The Association attempted for a time (1986-1992) to arrange annual scientific meetings, but this was just a bit too hectic. During that period we were also recruiting a number of new Institutional Members and since many of them were anxious to host meetings the more frequent meetings were of value. The AMLC also attempted to maintain some stability by trying to schedule three meetings in advance. This at least made everyone think about the coming meetings although our schedule almost always became reshuffled by the tides and storms of reality. Around 1995, the Executive Board decreed that scientific sessions will be held every 2 years. Since then the interval has stabilized between a year and 11 months to 2 years and 1 month.

GRAPH 2. TIME BETWEEN MEETINGS



DATES OF MEETINGS

The dates of meetings are relatively well dispersed throughout the calendar year (Table 2). Two to six meetings occurred in 10 out of the 12 months of the year (Table 2). Only the 30th day of the month has never been occupied by any meeting. The ends of the months are also unpopular as are the first two days of each month. The most popular days were the 14th, 20th, and 21st. No meeting dates have included the unlucky days of Friday or Tuesday the 13th, although eight 13ths are included.

TABLE 2. ASSOCIATION SCIENTIFIC MEETING DATES LISTED BY DAYS OF THE YEAR*

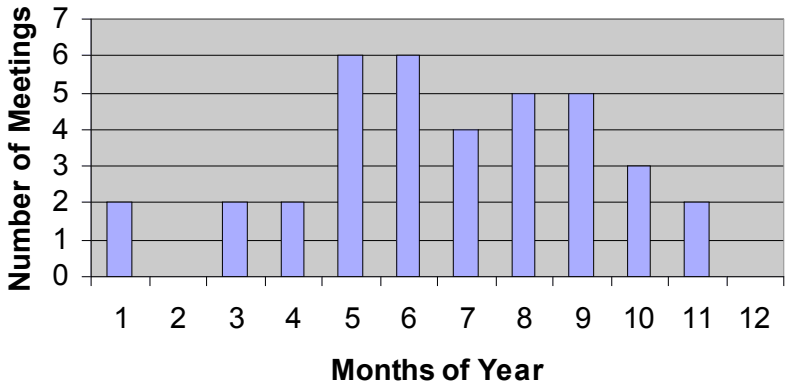
Jan	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Feb	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29		
Mar	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Apr	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	
May	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Jun	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	
Jul	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Aug	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Sep	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	
Oct	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Nov	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	
Dec	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31

*All colored numbers indicate meeting dates. Yellow indicates one meeting occurring on that date. Green indicates when two meetings occurred on the same date [16, 20, and 25-27 May, 4-6 and 13-16 June, 18 and 20-24 July, 13-14 and 17 August, and 4-8 September] and only September 4 in red has been occupied by three.

MEETINGS BY MONTHS

The most meetings by month were held in May and June (N = 6); August, and September had 5 meetings each; July 4; October 3; January, March, April, and November 2 each; and February and December none (Table 2; Graph 3). Late November through early January were obviously avoided due to the many holidays in that period. Why the Valentine month was avoided is a mystery (Table 2; Graph 3). The argument whether it is better to hold meetings during holidays or avoid them always arises. The Dominican Republic (IM-15) held a meeting (#14) over the USA Thanksgiving Holiday. Why the Valentines Day month has been avoided is less certain. Often the possibility of hurricanes are considered and this is probably why no meetings out of four were held in the "hurricane belt" in the month of July and only one of five in August. Oddly, four of five meetings in September were in this danger zone with Bermuda (IM-2) holding both of its meetings (#2 & 16) in this month with the result that the second meeting was whacked by two hurricanes. We must point out; however, that in the second case Bermuda was graciously filling in at-the-last-moment for Barbados (IM-1) that had frustratingly reneged on two planning meetings.

GRAPH 3. MEETINGS ARRANGED BY MONTH OF THE YEAR*



*Meetings are listed 37 times instead of the actual 35 meetings (including the extraordinary meeting in Panama that was not numbered) because two were split between months.

GEOGRAPHY OF MEETINGS

Geographically, only 23 of the 35 meetings have been in the Caribbean (Map 1). The Bahamas, Barbados, Bermuda, and Florida are not in the Caribbean, Havana, Cuba, has a Gulf of Mexico coast, and San Jose, Costa Rica, and Panama City are nearer the Eastern Pacific than the Caribbean. Most of these are; however, in the less rigorously defined "Greater Caribbean Region." The authors are actually in the process of redefining the Caribbean (Williams and Bunkley-Williams, in review). If their definition is accepted, it would place 29 of the AMLC Meetings in the modern definition of the Caribbean. A mere glimpse at Map 1 shows that the Association has not held many meetings in the Lesser Antilles (excluding the Virgin Islands) and in the western Caribbean. Hopefully, this will be remedied in the future. The 34th meeting planned for Dominica (IM-51) is a good start.

In terms of physical geography, we have met on 20 different islands of the Caribbean, West Indies, and Atlantic; in the continental areas of South, Central, and North America; and even in the Bermuda Triangle. From 9.0°N in the south in Panama to 32.4°N in the north in Bermuda and from 59.6°W in the east in Barbados to 84.1°W in the west in Costa Rica.

The most meetings (9) have been held in the Greater Antilles. Next in numbers are the islands off the South American coast and the Lesser Antilles with 6 each (if you include the US Virgin Islands with the Lesser Antilles as is sometimes done). If one chooses to count the USVI with the Greater Antilles, then their number of meetings rises to 13 and the Lesser Antilles drops to 2. Four meetings have been held in continental South America. If one wishes to include their coastal islands, this number rises to 10. Three meetings each have been held in the Bahamas and Central America. Two meetings each have been held in Bermuda and the continental USA (Florida).

Generally, our members would prefer to meet at sea level or perhaps in an undersea habitat. Hopefully, we can arrange such a wet session some day. Regrettably,

most of the underwater hotels seem to be planned for the Pacific. Our meeting sites have varied from 2 to 1161 meters above sea level, averaged 80.7 m, but with a mode of only 2 m (N=7). Most (62.9%) were at 10 m or less, 34.3% between 30 and 60 m, and only once in the mountains.

MAP 1. OUTLINE MAP OF THE TROPICAL/SUBTROPICAL NEW WORLD WITH ASSOCIATION MEETING SITE NUMBERS (See Meeting Numbers in Table 1).

Geopolically, 8 meetings have been held in Puerto Rico and the U.S. Virgin Islands by 3 Institutional Members; 3 in Curaçao by 2 IMs; 3 in Jamaica and Venezuela by 2 IMs each; 3 in the Bahamas by 3 IMs; 2 each by one IM in Bermuda, Colombia, Panama, and Trinidad; 2 by 2 IMs in Florida; and 1 in Barbados, Costa Rica, Cuba, the Dominican Republic, Dominica, (Map 1, Table 1, 6).

INSTITUTIONAL MEMBERS HOSTING MEETINGS

Only 25 of our 53 Institutional Members (47.1%) have hosted Association Scientific Meetings (Table 3). The Department of Marine Sciences (IM-4) leads with 4

meetings, followed closely by the Port Royal Marine Laboratory (IM-7) with 3 (or 2.5 if you consider that Discovery Bay Marine Laboratory [IM-24] co-hosted their 3rd one), 8 IMs have hosted 2 each, and 15 one each (counting 3 Cuban IMs that co-hosted the 23rd meeting and the Discovery Bay Lab for the 15th meeting).

TABLE 3. INSTITUTIONAL MEMBERS (IMS) HOSTING AMLC MEETINGS

IM	Laboratory	Locality	Meeting	Year
1	Bellairs Research Institute[1]	Barbados	7	1966
2	Bermuda Institute of Ocean Science	Bermuda	2 16	1958 1981
3	Caribbean Marine Biological Institute	Curaçao	4 12	1962 1976
4	Department of Marine Sciences[2]	Puerto Rico	1 10 22 30	1957 1973 1989 2001
5	Lerner Marine Biological Laboratory	Bimini	5	1963
7	Port Royal Marine Laboratory[3]	Jamaica	3 8 15*	1960 1969 1980
11	Centro de Investigaciones Pesqueras	Cuba	23*	1990
12	Punta de Betín[4]	Colombia	13 20	1977 1987
13	Margarita Station of Marine Investigation	Venezuela	6	1965
14	Oceanographic Institute[5]	Venezuela	9 29	1971 1999
15	Institute of Marine Biology[6]	Dominican Republic	14	1978
17	Smithsonian Tropical Research Institute	Panama	0[7] 25	1970 1992
18	West Indies Laboratory[8]	St. Croix	11 19	1975 1986
19	MacLean Marine Science Center	St. Thomas	27 33	1995 2007
22	RSMAS, University of Miami[9]	Miami, Florida	17	1983
24	Discovery Bay Marine Laboratory	Jamaica	15*	1980
26	Institute of Marine Affairs	Trinidad and Tobago	18 31	1985 2003
28	Mote Marine Laboratory	Sarasota, Florida	21	1988
31	Caribbean Marine Research Center	Bahamas	24	1991
32	Gerace Research Center	Bahamas	26	1994
34	Instituto de Oceanología	Cuba	23*	1990
35	Centro de Investigaciones Marinas	Cuba	23*	1990
37	Center for Marine Science[10]	Costa Rica	28	1997

48	Curaçao Sea Aquarium	Curaçao	32	2005
51	Institute for Tropical Marine Ecology	Dominica	34	2009

[1]McGill University, Barbados; [2]University of Puerto Rico; [3]University of the West Indies; [4]Institute of Marine Investigation, Santa Marta; [5]Universidad de Oriente; [6]Centro de Investigaciones de Biologia Marina, Universidad Autónoma de Santo Domingo; [7]Extraordinary Meeting; [8]Fairleigh Dickinson University; [9] Rosentiel School of Marine and Atmospheric Sciences, University of Miami; [10]and Limnology Investigations, University of Costa Rica; *co-hosted

Hospitality Index

Our "Hospitality Index" (HI) is a measure of the number of meetings over time an Institutional Member (IM) has hosted (Table 4). The number is a percentage generated simply by dividing the number of meetings a laboratory hosted by the number of years that the laboratory has been an Association member. A score of 5.0 would mean that one meeting was hosted every 20 years. Considering that we have more than 20 IMs, this would be a good score. The former West Indies Laboratory has the record score of 10.5 over their brief 19-year membership. We suspect that with the number of IMs we have now this score will never be equaled. The Department of Marine Sciences is second with a HI of 7.7 over 52 years. But this is not a contest, the HI is just a relative indicator to show labs how they are doing in the hosting process. Eleven other laboratories have respectable HIs. The other IMs might consider hosting future meetings.

Of the 28 Institutional Members who have not hosted a meeting, 9 of these for one reason or another quickly fell from Association membership, 4 others worked with the Association for longer periods of time but also fell, and 12 are new members with less than 9 years in the AMLC.

One of our former (1965-1992) Institutional Members (IM-16), the Los Roques Scientific Foundation appears to have gone 27 years without hosting a meeting; however, I believe their meeting preparations may have been the ones that were shot to pieces by bandits causing a meeting cancellation (We have never been able to confirm that story. Anyone with any further information, please contact us.). They always paid their Institutional dues on time and without the necessity of a reminder.

A number of places in the Caribbean have never been chosen for a Scientific Meeting of the Association. If meetings in these areas are in the Association future, the future will certainly be both fun and exciting.

Table 4. Institutional Member (IM) Hospitality Index (HI) [Calculated for 2009. The 2 host with fewer than 15 years of membership were not considered in the discussion. Laboratories co-hosting meetings* received a proportional amount of the meeting number.]

IM	**Laboratory[1]**	**Meetings**	**Years**	**HI**
18	West Indies Laboratory	2	19	10.5
4	Department of Marine Sciences	4	52	7.7

26	Institute of Marine Affairs	2	28	7.1
19	MacLean Marine Science Center	2	29	6.9
37	Center for Marine Science	1	17	5.9
5	Lerner Marine Biological Laboratory	1	18	5.5
17	Smithsonian Tropical Research Institute	2	40	5.0
7	Port Royal Marine Laboratory[3]	2.5[2] (3)	52	4.8 (5.8)
3	Caribbean Marine Biological Institute	2	43	4.7
14	Oceanographic Institute	2	43	4.7
12	Punta de Betín	2	47	4.3
28	Mote Marine Laboratory	1	23	4.3
31	Caribbean Marine Research Center	1	23	4.3
2	Bermuda Institute of Ocean Science	2	52	3.8
22	RSMAS, University of Miami	1	32	3.1
15	Institute of Marine Biology	1	42	2.4
1	Bellairs Research Institute	1	48	2.1
13	Margarita Station of Marine Investigation	1	47	2.1
24	Discovery Bay Marine Laboratory	0.5[2] (1)	29	1.7 (3.4)
11	Centro de Investigaciones Pesqueras	0.33[3] (1)	21	1.6 (5.0)
34	Instituto de Oceanología	0.33[3] (1)	20	1.6 (5.0)
35	Centro de Investigaciones Marinas	0.33[3] (1)	20	1.6 (5.0)
32	Gerace Research Center	1	20	0.5
51	Institute for Tropical Marine Ecology	1	4	25.0[4]
48	Curaçao Sea Aquarium	1	6	16.7[4]

[1]See lab details in Tables 1 and 3; [2]Port Royal Marine Laboratory (IM-7) and Discovery Bay Marine Laboratory (IM-24) co-hosted the 15th meeting; [3]Centro de Investigaciones Pesqueras (IM-11), Instituto de Oceanología (IM-34), and Centro de Investigaciones Marinas (IM-35) co-hosted the 23rd meeting; [4]A good start, but these labs do not need HI evaluation for the first 15 years.

Physical Distance Between Meetings

The diversity of meeting sites or their geographic distance one from another was only one of the considerations taken in choosing meetings (Table 5). This was particularly important in the early days of the Association where the vast majority of the presentations were made by local students or those close by and thus meeting sites needed to be passed around equitably. The closest sequential meeting sites were Mayagüez, Puerto Rico and St. Croix USVI only 264 km apart; Margarita Island, Venezuela and St. James, Barbados (530 km); and Curaçao, Netherlands Antilles and Santa Marta, Colombia (584 km). The most distant were Bimini, Bahamas and Margarita

Island, Venezuela (2269 km), San Jose, Costa Rica and Cumaná, Venezuela (2282 km), St. Thomas and Costa Rica (2344 km), and Miami, Florida, USA and Port of Spain, Trinidad, Trinidad and Tobago (2557 km). The distances between meetings averaged 1395.5 km. The 10th (Puerto Rico) and 11th (St. Croix) meetings were probably too close together. However, since two new labs had joined for the first time from the U.S. Virgin Islands (IM-17 & 18), there was probably considerable sentiment for a Virgin Islands meeting at the time.

TABLE 5. DISPERSION OF THE SCIENTIFIC MEETINGS OF THE ASSOCIATION OF MARINE LABORATORIES OF THE CARIBBEAN.

No.	Locality	No.	Locality	Distance Apart (km)
17	Florida	18	Trinidad	2557
27	St. Thomas	28	Costa Rica	2324
28	Costa Rica	29	Venezuela	2282
5	Bimini	6	Venezuela	2269
20	Colombia	21	Florida	2003
2	Bermuda	3	Jamaica	1985
15	Jamaica	16	Bermuda	1967
24	Lee Stocking	25	Panama	1963
21	Florida	22	Puerto Rico	1916
7	Barbados	8	Jamaica	1877
4	Curaçao	5	Bimini	1864
22	Puerto Rico	23	Cuba	1745
0*	Panama	9	Venezuela	1739
25	Panama	26	San Salvador	1733
16	Bermuda	17	Florida	1643
8	Jamaica	9	Venezuela	1614
1	Puerto Rico	2	Bermuda	1587
23	Cuba	24	Lee Stocking	1520
19	St. Croix	20	Colombia	1251
26	San Salvador	27	St. Thomas	1196
3	Jamaica	4	Curaçao	1045
8	Jamaica	0*	Panama	1021
30	Puerto Rico	31	Trinidad	1006
9	Venezuela	10	Puerto Rico	945
13	Colombia	14	Dominican Republic	939
29	Venezuela	30	Puerto Rico	918
18	Trinidad	19	St. Croix	874
31	Trinidad	32	Curaçao	826
32	Curaçao	33	St. Thomas	819
11	St. Croix	12	Curaçao	753
14	Dominican Republic	15	Jamaica	707

12	Curaçao	13	Colombia	584
33	St. Thomas	34	Dominica	578
6	Venezuela	7	Barbados	530
10	Puerto Rico	11	St. Croix	264
34	Dominica	35		

LANGUAGE OF THE INSTITUTIONAL HOST

The English language was the primary one spoken in 18 meeting sites, Spanish in 14, and Dutch in 3. We have had no Scientific Meetings in any of the French-speaking islands, but we only had an Institutional Member in one (#30) for five years. The alternation among languages has been fairly good with two English meetings in a row only four times (1958 + 1960, 1966 + 1969, 1994 + 1995, 2007 + 2009), two Spanish meetings three times (1970 + 1971, 1977 + 1978, 1989 + 1990), three Spanish meetings once (1997, 1999 + 2001), and five in English (1980, 1981, 1983, 1984 + 1986) once (Table 1). Simultaneous translation, usually from English to Spanish and vice versa, has been employed in several meetings, but this is more appropriately detailed in another Part.

LITERATURE CITED

Bunkley-Williams, L. and E. H. Williams, Jr. 2007. Scientific meetings of the Association of Marine laboratories of the Caribbean: Adventures in paradise. Proceedings of the Association of Marine laboratories of the Caribbean 33: 96 (abstract).

Williams, E. H., Jr. and L. Bunkley-Williams. 2008. What and where is the Caribbean? A modern definition. Caribbean Geography (in review).