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The Association of Island Marine Laboratories of the Caribbean - A Historical Perspective

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The founding fathers: The Association of Island Marine Laboratories, later to become the Association of Island Marine Laboratories of the Caribbean, came into being on the afternoon of April 5th 1957 as a result of a resolution passed unanimously at an Inter-Island Marine Biological Conference hosted by the University of Puerto Rico and the Office of Naval Research and held at La Parguera, Puerto Rico. It is important that we recognise here the involvement of the Office of Naval Research, and I return to that later. The participants at this meeting were the Directors of seven relatively newly founded marine laboratories in the insular Caribbean, and the long established Bermuda Biological Station. The laboratories and their then directors are listed in Table 1; these people must be recognised as the founding fathers of the Association. Other significant Caribbean marine science personalities present at that meeting included Louis Mowbray (Director of the Bermuda Aquarium), Robert Coker (planktonologist), Norman Newell (palaeontologist) and Tom Goreau (reef ecologist).

Behind the scenes was a remarkable man, godfather to the Association, in the form of Sidney Galler at that time an official of the Office of Naval Research in Washington. Sid, as he was affectionately known, had developed a particular interest in the work going on at the small island marine laboratories in the Caribbean and was constantly seeking ways and means to assist people working there. I believe it was Sid Galler's idea that the directors of these small laboratories should get together to discuss their common problems and how their work might be assisted or improved by some form of collaboration. Whatever his role in the germination of the idea Sidney Galler made it possible by directing Office of Naval Research funds to support everyone's attendance at the meeting.

In any discussion of the founding of the Association it is important to remember, and indeed never to forget, the rationale behind the decision to hold that first meeting. All of the institutions were small, all were isolated; what was perceived was that by having regular meetings, knowing what was happening at the other laboratories, and seeking ways of collaborating on common problems the disadvantages of isolation and small size might be partially overcome. Contact and collaboration between laboratories was perceived as being more important than the formal presentation of scientific papers. This perception seems to have changed with the passage of time.

Foundation of the Association: At the Foundation Meeting in Puerto Rico in 1957 each of the laboratory directors made a presentation about the activities and work of their institution and six scientific papers were presented. Of greater historical and contemporary interest are some of the other things which were discussed at that meeting, particularly because several of them are still at

TABLE 1

Foundation institutional members of the Association of Marine Laboratories, 1957

Member Laboratory	Parent Institution	Director
Bermuda Biological Station	None	William Sutcliffe
The Lerner Marine Laboratory	American Museum of Natural History	Albert Parr*
Institute of Marine Biology	University of Puerto Rico	Juan Rivero
Bellairs Research Institute, Barbados	McGill University	John Lewis
Caribbean Marine Biological Institution	Government of Curaçao	Jacques Zaneveld
Port Royal Marine Laboratory	University of the West Indies	David Steven
Laboratory of Marine Biology	University of Oriente	Manuel Diaz- Piferrer
Laboratory of Marine Biology Marianao, Habana	University of Villanueva	Jose Suarez Caabro
Oficina Hidrografica	La Marina de Guerra Cubana	Howell Rivero

* Albert Parr was Director of the American Museum of Natural History and nominal Director of the Lemer Laboratory.

the forefront of our concerns today. Among these topics we find the following:

(i) Opportunities for co-operation among island laboratories and between island laboratories and continental institutions. Today we still discuss the need for cross linkages but historically there has been relatively little scientific collaboration between island laboratories. Furthermore when we do develop such programmes we sometimes get weighed down by bureaucratic and financial problems which delay the process beyond realistic limits. I make this point, right or wrong, because I question whether large scale regional collaboration is cost effective, and because I believe that the most effective programmes are those conducted at the one to one level either directly between two institutions or in staff and student exchange between such institutions. I return to this topic later.

(ii) The founding meeting also discussed the possibility of joint use and support of a large research vessel. The topic was never pursued and the topic remains on the regional agenda, particularly in institutions in the Caribbean Community (CARICOM). In these days of recession it remains a dream but it is significant that in the period 1965 to 1975 when Woods Hole's "GOSNOLD" and Duke University's "EASTWARD" made regular visits to the Caribbean, several institutions in the region made effective use of these vessels demonstrating a need for such a facility, a need also recently demonstrated in the CARICOM countries by the use of the Indian Research vessel "SAGAR KANYA".

(iii) A resolution moved at the 1957 meeting proposing "A Journal designed for the publication of results of original (marine science) research" was defeated and replaced by another (adopted) resolution that "A Committee be appointed to explore the possibility of establishing such a journal." Until recently no regional marine science journal existed, although the Bulletin of Marine Science, published in Miami, deals specifically with tropical marine science. Recently however one of our institutional members, The Institute of Marine Affairs in Trinidad and Tobago, has commenced publication of a new journal "Caribbean Marine Studies" which provides a significant vehicle for publication of marine science papers of regional interest.

(iv) Other topics discussed at the foundation meeting and which still remain at the

Fig. 1. Some of the `founding fathers' of the Association of Island Marine Laboratories discussing a collaborative project on primary productivity at the Bermuda meeting of 1958. Left to right: Louis Mowbray, Robert Coker, Bill Sutcliffe, David Steven, Luis Howell Rivero.

forefront of discussion are the need for more taxonomists, the need for standardization of methods, the need to stimulate interest in marine science among high school students and the need for a broad based public awareness programme through the printed and electronic media.

The list of topics discussed in 1957 and the concerns of today prompt one to that old French saying "Plus ce change, plus ce même chose." This applies equally to one event at the 1957 meeting recorded in these words: "The showing of pictures was interrupted at the beginning by failure of electric current."

Scientific meetings: The 1957 meeting in Puerto Rico was a foundation meeting and the first regular meeting of the newly formed Association was held at the Bermuda Biological Station in 1958. This meeting, memorable for more than its science, was the first opportunity for individuals from the various laboratories to present papers on their research and other activities and the format of that meeting has continued relatively unchanged through twenty-three subsequent meetings held successively at different member institutions, culminating at this twenty-fifth meeting in Panama. Historically neither the form of our meetings nor their content have changed significantly over the thirty-five years of the Association's life. Papers on invertebrate biology and reef biology form 38% of the papers presented (Table 2) trailed by papers on fish biology, plant biology, marine ecology and oceanography. Furthermore the ranking of these topics in order of the number of papers changes very little with the passage of time.

The Association has, in fact, been primarily concerned with biology and such important fields as oceanography and geology between them only contributed fourteen per cent of the papers presented. This is a pity but has both historical and logical causes. Oceanography is fundamental to everything we do but within many Caribbean institutions has been neglected. Many of the regional laboratories were set up in the early days as marine biology laboratories, they operated on very limited budgets, and could not afford the high cost of oceanographic research. At the same time the ease of access to coral reefs spurred on an abundance of studies on reef ecology much of it initiated and encouraged by the Association's founding member, the late Tom Goreau. Oceanography is expensive and Caribbean oceanography has been dominated in the past by researchers from the metropolitan countries with access to large research grants. It is important to have an indigenous regional capability in oceanography which should be encouraged by this Association through its member laboratories, working in collaboration with other regional organisations such as IOCARIBE and CCOSNET.

Collaboration and co-operative projects: Clearly collaboration and co-operation between institutions was an important objective in the minds of the founding fathers, and yet on the surface this does not appear to have been prominent in the activities of the Association. One co-operative project that got off the ground very quickly after the 1958 Bermuda meeting was a study of primary productivity in the western tropical Atlantic in which the Bermuda Biological Station, Bellairs Research Institute and the Port Royal Marine Laboratory of the University of the West Indies participated. While some of the findings of that study have been superseded as a result of newer refined methodology, the project was a landmark study in its day. An attempt to develop a wide ranging collaborative study of latitudinal variation in growth rates in marine organisms, spearheaded by another founder member, John Lewis, was eventually reduced through funding constraints to one-to-one collaboration between Bellairs in Barbados and Port Royal in Jamaica - almost on the same latitude.

TABLE 2

Papers presented at AMLC Meetings 1957-1988. (N=602)

Topic	Percent
Invertebrate biology	23
Reef biology	15
Fish biology	12
Plant biology	9
Marine ecology	9
Oceanography	9
Fisheries	5
Geology	5
Plankton	5
Aquaculture	2
Productivity	2
Technical	2
Whales, turtles, birds	1
Policy, management, etc.	1

Notes:
(i) This table must be used as a guide only. There is some overlap between topics (e.g. some papers assigned to Reefs might have been assigned to Invertebrates).
(ii) No data are included from the 20th meeting in 1987.

More recently we have seen extensive collaboration between member institutions in recording data on prominent events such as bleaching in corals. We have also witnessed the long drawn-out negotiations and discussions leading up to the Caribbean Coastal Marine Productivity Project (CARICOMP), spearheaded by John Ogden, and which is now installing equipment at twenty Caribbean marine laboratories with a data management centre in Jamaica. This is certainly the largest, but not the most cost effective, collaborative project attempted by member institutions, but if it succeeds it will be another landmark in our activities. It is perhaps not out of place to mention here that it is a pity that this project had to use the acronym CARICOMP which is too easily confused with the acronym CARICOM belonging to the long standing socio-economic grouping of Caribbean states, the Caribbean Community.

In reflecting on our own internal efforts at collaboration, we should not lose sight of the fact that during the thirty-five years of our existence other regional groupings and bodies have emerged with similar objectives. In the

Fig. 2. Participants at the Association's meeting in Bermuda in 1958. Front row left to right: Bill Sutcliffe (Bermuda), Juan Rivero (Puerto Rico), David Steven (Jamaica), Luis Howell Rivero (Cuba), Robert Coker (Puerto Rico), Louis Mowbray (Bermuda); middle row: Ivan Goodbody (Jamaica), José Suarez Caabro (Cuba), Carlos González Núñez (Dominican Republic), Norman Newell (Bimini), Jacques Zaneveld (Curaçao), Colonel William E. Stevens (Bermuda), John Lewis (Barbados); back row: Luis Rivas (Venezuela), Alexandre Ivanov (Bermuda), John Vernberg (U.S.A.), Raymond McCallister (Bermuda), David Menzell (Bermuda), Juan Gonzalez (Puerto Rico).

forefront of these is the Intergovernmental Oceanographic Commission's Sub-Commission for the Caribbean, IOCARIBE, with headquarters in Cartagena, Colombia. IOCARIBE has spearheaded several important collaborative projects, notably the CARIPOL and CEPOL programmes on oil and other forms of pollution. While IOCARIBE must remain a facilitator it is important for the Association of Marine Laboratories to maintain contact and work closely with it. At the other end of the Caribbean the Caribbean Community (CARICOM) has recently established a Caribbean Community Ocean Sciences Network (CCOSNET) to coordinate and assist the development of ocean sciences within the Community which extends from Belize in the west to Guyana in the east. The focal point for CCOSNET is at the Institute of Marine Affairs in Trinidad and Tobago which is a member institution of the Association of Marine Laboratories.

Administration of the Association: One of the significant features of the administration of the Association is that it has remained continuously housed in the department of Marine Sciences at the University of Puerto Rico, and the Association must take this opportunity of expressing gratitude to that institution for its continued support, and in particular we must express our gratitude to Bert Williams for enduring for so long the post first of Secretary/Treasurer and more recently

Executive Director. Most working scientists find administration a nuisance and must always be grateful to those who so willingly do this very necessary work, who produce the annual report, the newsletter and who relentlessly chase us up when we do not pay our subscriptions.

There is another aspect of administration which might be commented on here. In 1978 at the fourteenth meeting in Santo Domingo we approved a new set of bye-laws. The old bye-laws, approved in Bermuda in 1958, were somewhat sloppy and much of the revision was concerned with what might be termed `bureaucratic tidying'. The new bye-laws also created the post of Executive Director, with a separate Treasurer, and formalised the positions of Editor of the Proceedings and Editor of the Newsletter. There was another change in the bye-laws which is perhaps questionable. The original articles stated that "individual members shall be staff members of the different laboratories or scientists who have worked in any member station or have special interest in problems pertaining to the marine sciences of the tropical Atlantic or Caribbean. Individual members may only be proposed by institutional members. Applicants for membership shall be approved..... at a meeting of the Association before being accepted." The new Articles have left out the requirement that individual members shall be proposed by an institutional member and have also omitted the requirement that their membership be approved at a meeting of the Association. Instead the new Articles simply state "Applicants for individual membership will be accepted upon payment of dues" - no more, no less, and one can buy into voting rights in the Association simply by paying a fee, just like acquiring voting rights in a business corporation by purchasing shares. This is an Association of Marine Laboratories, not of individuals, and it may have been a mistake to alter the requirements for individual membership.

Informal activities: One of the important aspects of any scientific meeting is the opportunity to have face to face contact with individuals with similar interests to one's own. We can read their work in published papers but there is no substitute for the opportunity to meet and discuss common problems. The Association of Island Marine Laboratories has provided such opportunity for scientists working in the Caribbean, albeit often favouring those from metropolitan countries with access to research grants which provide for travel while some of those who most need the contact and come from less well-funded institutions cannot make use of this opportunity. With the material available to me I have not been able to analyze this aspect of Association activity but it is an analysis which might be worth undertaking and addressing. If those for whom the Association was founded prove to be at a disadvantage then there may be cause for less frequent and less expensive meetings.

Conclusion: In the preceding presentation I have endeavoured to provide objective observation on the Association and its activities. In conclusion let me make a more personal observation based on thirty-four years of membership in the Association, twenty-seven of them as a laboratory director. The Association was founded specifically as a means of developing contact and collaboration between isolated laboratories in the Caribbean; the institution not the individual, was the important component. The family was small and intimate and everyone knew everyone else so that contact between meetings was a common place event. With the passage of time the family has grown and become less integrated, more impersonal; indeed the family has grown so large that no one institution can expect to host a meeting more often than once in a quarter of a century. This is a negative component as by hosting a meeting one can not only show off the institution's work, but more importantly bring an assortment of marine science talent into contact with one's own staff who normally cannot afford to travel to Association meetings. With the growth of the family so also has there been a great increase in the amount of time that has to be devoted to the presentation of papers as opposed to less formal contact and discussion between persons with similar interests. But there is a further and perhaps disturbing aspect to this growth in individual membership, but one on which I have been unable in the time available to make an objective analysis. Many scientists working in the Caribbean are itinerant researchers,

working here for periods of time varying between a few months and a few years before moving on elsewhere. We must welcome this infusion of talent and expertise, and the expansion of knowledge that stems from it. However, the Association was founded to strengthen indigenous capability and to cater to the needs of the resident or long term resident community of scientists, A subjective analysis suggests that that community has been progressively marginalised with the passage of time and I would dare to suggest that if it had not been marginalised there would have been no need for the Caribbean Community to set up an independent Ocean Sciences Network. As the Association has grown it has become looser not stronger and has failed to grow into a force in regional scientific management. Therefore a part of the analysis must include that fact that those of us who had responsibility over the past quarter century maybe did not give sufficient support to the Association to enable it to develop a powerful regional presence.

It is not a part of my brief to discuss where do we go from here, but I would proffer the suggestion that the Association needs to take a hard look at its objectives and image. If the major thrust is scientific dialogue at the individual level, then thought must be given as to how to involve young scientists from within the region more actively in the process. If the thrust is for better integration between laboratories, as perceived by the founding fathers, then one needs more frequent meetings of laboratory directors independent of scientific meetings.

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