TABLE OF CONTENTS

Introduction, E. H. Williams ........................................ 1

Address by President, Wolfgang E. Steurer .......................... 2

SCIENTIFIC PAPERS PRESENTED:

INVERTEBRATES/INVERTEBRADOS
E. H. Williams, Chairman

Schuster, R. The air-breathing intertidal fauna of Bermuda .......... 2

Schweimanns, M. The distribution pattern of gastropods and bivalves (Mollusca) in Harrington Sound, Bermuda .......................... 3

Vicente, V. P. Interactions between sponges and hermatypic corals in coral reef environments in Puerto Rico .......................... 3

Steger, R. and R. L. Caldwell Individual variation in the cavity-defense behaviors of the stomatopod, Gonodactylus bredini .......... 4

Williams, E. H., Jr. and L. B. Williams New isopods from West Indian fishes .............................................................. 4

Williams, L. B., and E. H. Williams, Jr. Experimental transfers of female Anilocra chromis (Isopoda: Cymothoidae) on brown and blue chromis at Hydrolab Habitat, St. Croix ............................ 5

Brandon, M. Dondice n. sp. (Favorinidae: Opisthobranchia) and its association with Cassiopea in Puerto Rico .......................... 5

FISH, FISHERIES, TURTLES/PECES, PESQUERIAS, TORTUGAS
T. Sleeter, Chairman

Parrish, J. D. A study of fishery ecology of an island reef tract ...... 6

Luckhurst, B. E. and H. Powles Ichthyoplankton of the central Venezuelan coast: composition, abundance and seasonality ............. 6


Ireland, L. C. Homing behavior of immature green turtles (Chelonia mydas) ............................................................... 7

Ogden, J. C., S. Tighe and S. Miller Foraging behavior of juvenile green turtles (Chelonia mydas) on St. Croix .......................... 7

Clavijo, I. E. and A. T. Bardales Diel migrations of two parrotfishes ............................................................................ 8
Lopez, J. M. The structure of the ocean off Punta Tuna, Puerto Rico ........ 8
Meischner, D., H. Torunski and G. Kuhn The Bermuda platform: A true
atoll in the Atlantic Ocean ........................................... 8
Hayes, R. L. Bioaccumulation of radiocarbon by selected
marine organisms ......................................................... 9
Cardellina, J. H., II. Chemical and pharmacological investigations
of Bermudian fauna and flora ........................................ 9
Jickells, T. Nutrients and trace metals in the inshore waters of
Bermuda ................................................................. 10

ECOLOGY/ECOLOGIA
W. Sterrer, Chairman

Iliffe, T. M. Submarine cave studies in Bermuda ......................... 10
Sleeter, T. M. Environmental sensitivity mapping of the Bermuda
coastal zone .............................................................. 11
Wingate, D. The role of biological research field stations as a
catalyst for local conservation ....................................... 11
Cubit, J. The environment of a fringing reef in the southern
Caribbean .................................................................. 12
Brewer, M. S. and T. D. Jickells Terrestrial water bodies on
Bermuda ................................................................. 12

CORALS/CORALES
M. Jones, Chairman

Ramsaroop, D. Octocorals in an estuarine environment with special
reference to Trinidad ....................................................... 13
Bardales, A. T. Reproductive cycles of three species of octocorals
in La Parguera, Puerto Rico ............................................. 14
Newton, E. C. and T. van't Hof The distribution of black corals
along Bonaire ............................................................. 14

REPORT

Linsky, R. B. Trinidad and Tobago's Institute of Marine Affairs: a
brief overview .......................................................... 14
INTRODUCTION

The sixteenth meeting of the Association of Island Marine Laboratories of the Caribbean was hosted by the Bermuda Biological Station, with assistance from the Department of Agriculture and Fisheries of Bermuda, 4 to 8 September, 1981. Members were welcomed to the meeting with a tour of the Biological Station by the President of the Association and Director of the Station, Wolfgang Sterrer, in the afternoon, and an informal swizzle party in the evening of 3 September. The next morning the meetings began with welcoming addresses by Drs. Sterrer and James Burnett-Herkes, Assistant Director of the Department of Agriculture and Fisheries, in charge of Fisheries. Meredith Jones opened the scientific sessions, which extended over 3 days in 4 sessions with 28 presentations. Participants were treated to a boat trip with skin or SCUBA diving on the "boiler reefs" and a wreck off St. David's, 5 September; a boat trip and SCUBA dives on North Rock, or a tour of terrestrial caverns, during the day and a "bar-b-q" on the evening of 6 September; Tours of the Aquarium and Museum and of the Fish Processing Plant and Fisheries Headquarters, including an excellent buffet dinner served at the plant, 7 September; a planned tour of Nonsuch Island, cancelled by Hurricane Floyd, was replaced by a film concerning Nonsuch Island and a slide show of photographs from "The Fauna and Flora of Bermuda", a book being prepared by Dr. Sterrer, 8 September. The meetings were concluded with a cocktail party and farewell dinner with many board members and patrons of the biological station. The Executive Board meeting was conducted 6 September by:

Wolfgang Sterrer President John Ogden St. Croix
Meredith Jones 1st Vice Pres. Peter Lutz Miami
Ernest Williams Sec./Treasurer Helen Gjessing St. Thomas*
Ray Hayes 2nd Mem.-at-Large Ronald Linsky Trinidad*
Ana Bardales Puerto Rico Doon Ramsaroop Trinidad*
John Cubit Panama (*new members)

The Institute of Marine Affairs of Trinidad and The Marine Science Center, College of the Virgin Islands, St. Thomas were invited to Association membership. The following offers to host Association meetings were accepted by the board: 1) Miami, 1983; 2) Trinidad, 1984; and 3) St. Croix, 1986. An invitation by Dr. Manuel Hernandez to host an Executive Board Meeting in Puerto Rico for 1982 was accepted by the Board.

The Business meeting was held on the evening of 7 September. Committees continued or appointed by the President included: HISTORY: Charlene Long*, Ernest Williams; ADVERTISEMENT: Paul Yoshioka; COMMUNICATION: Doon Ramsaroop*, Jeremy Woodyl, Ray Hays; SCHEDULE: John Ogden*, Manuel Hernandez (*Chairman). New officers were elected:

President: Alan Berman Secretary-Treasurer: Ernest Williams
1st Vice President: Meredith Jones Members-at-Large: Charlene Long, Ray
2nd Vice President: Doon Ramsaroop Hayes, Jim Parrish

Despite the effects of Hurricane "Emily" and the direct threat of Hurricane "Floyd", the Bermuda Biological Station produced an excellent meeting. The Association is very grateful to Wolfgang Sterrer, Jim Burnett-Herkes, Brian Luckhurst, Margaret Emmot, Harry Barnes, and all the staff and students of the Bermuda Biological Station for making the sixteenth Meeting enjoyable and successful.

Ernest H. Williams - Editor.

ADDRESS BY THE PRESIDENT - Wolfgang E. Sterfer

As director of your host institution and current President of the AIMLC, I have the pleasure of welcoming you to Bermuda and its Biological Station. Of the 2 main goals of our Association, the first, to facilitate the exchange of information on marine research in the Caribbean, will be served by the presentations and discussions over the next 5 days; it is the second goal, to promote the well-being of island marine laboratories, that may deserve a few words.

Judging from my own experience, island laboratories are every bit as fragile as the ecosystems they are designed to explore - they are truely an endangered species. On the surface, the danger invariably expresses itself in financial terms; at the root, however, are misconceptions persistent among the decision makers in science politics. The image of marine stations as holiday resorts for "biologists recuperating from a siege of instructional duty", and "the proposition that one cannot continuously persue intellectual work in a warm climate", as listed by W. J. Crozier in 1923 in a letter to SCIENCE (vol. 57, no. 1478), are myths which are very much alive today, and so is the belief that it is more economical to have marine organisms shipped to the scientist's home lab. All those of us who have experienced the bliss of doing research at a marine lab, uninterrupted, and in close proximity to organisms in their natural environment, will agree that there is simply no substitute. Crozier (who during his 5 years as resident naturalist in Bermuda published 70 papers) continues to extol the virtues of an island marine laboratory: "Within less than an hour's run in a small boat from the Bermuda laboratory and in most cases closer than this, one could reach exposed or sheltered shores of sandy, muddy, or rocky type, caves, mangrove creeks, lagoons, and the locations of four or more distinct types of coral associations, each with its characteristic fauna, and all of them free of pollution; and this at all periods of the year. I doubt very much if those who have not tested the experience of continuous biological work (not merely collecting of specimens) under such conditions have a proper realization of its possibilities. The abundance of this fauna can be appreciated only by living with it. It seems to me stupid that the opportunity to further the advancement of biology in locations of this sort has not been seized."

As shown by the many island laboratories which have been founded since and are represented here today, this opportunity has been seized. The challenge to all of us is to ensure that island marine laboratories move away from the status of endangered species, and toward a stable and secure future.

THE AIR-BREATHING INTERTIDAL FAUNA OF BERMUDA
Reinhart Schuster
Inst. Zoologie, Univ. Graz, A-8010 Graz, Austria

The air-breathing intertidal fauna of Bermuda was examined in 1977 and 1981. More than 25 species of centipedes, pseudoscorpions, mites, apterygote and pterygote insects were collected. Mites are the dominant group both in number of species and individuals. Two orders (Pseudoscorpiones and Diplura), several families, and all species (except the centipede) collected from rocky shores are new records for the Bermudan fauna. The mite family Fortuyniidae, known from the tropical Pacific, is recorded for the first time from the Atlantic. Some taxa are new for science (Mahnert and Schuster 1981, Revue Suisse Zool. vol. 88; Nosek, loc. cit.). Studies of the ecology and zoogeography of these groups are continuing.