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information paper 7

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FOREWORD

The Second Meeting of the Consultative Committee for the Indian Ocean Biological Centre was held in Ernakulam, South India, from 18 to 27 March 1964. This was a very important meeting for the co-ordination of the International Indian Ocean Expedition and it is desirable that the Report of the above meeting be distributed as soon as possible. Therefore this present issue of the Information Paper comprises only the said Report and a map showing the distribution of plankton samples taken by Indian Ocean Standard Nets from ships participating in the Expedition and subsequently deposited in the Centre. Information Paper No. 8 will be published shortly and will contain all other information on the Expedition presently at hand and which it has not been possible for us to include in this issue.

unesco

Unesco Office of Oceanography
Paris, May 1964

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IIOE INFORMATION PAPER
No. 7

REPORT OF THE 2ND MEETING OF THE CONSULTATIVE COMMITTEE FOR I.O.B.C.

The 2nd Meeting of the Consultative Committee for the Indian Ocean Biological Centre was held in Ernakulam, South India, March 18 to 27, 1964. Representatives of UNESCO, INCOR Advisory Board for IOBC, SCOR and national observers took part in the Meeting. A list of persons attending is given in Annex I. During the period of the meeting informal discussions were held between the staff of IOBC and the visiting participants. In addition lectures on the following subjects were given by members of the Committee:

Prof. S. Motoda	-	Distribution of plankton in relation to current systems.
Mr. R. S. Glover	-	Spatial and temporal variations in marine plankton.
Dr. J.A. McGowan	-	Plankton communities in the sea.
Dr. M.E. Vinogradov	-	Distribution of tropical plankton of different trophic levels.

1. Terms of reference for the Consultative Committee.

Following a suggestion made by SCOR, participants discussed and agreed upon the following terms of reference for the Consultative Committee:

"The Consultative Committee for the Indian Ocean Biological Centre shall consist of at least four plankton experts nominated, on the advice of SCOR, by UNESCO. The Committee shall elect, from among its members, a Chairman who will serve for a period of one year. The Committee shall have the following functions:

1. To assume responsibility, through the Curator, for the loan and examination of the sorted samples by specialists throughout the world.
2. To work out a general procedure for the maintenance of the International Collections.*

*The International Collections are defined as all those plankton samples sent to IOBC by any country during the period and from the area of the IIOE. The International Collections do not include, however, samples sent for contract sorting.

3. To advise with regard to the presentation of data resulting from the examination of samples received by the Centre.

4. To advise with regard to the present and future scientific activities of the Centre.

5. To maintain adequate collaboration between the Centre and national and international organizations studying the Indian Ocean."

Mr. R.S. Glover was elected Chairman for the 2nd Meeting of the Consultative Committee.

2. Progress of work at the Centre.

A report on the administrative aspects of work at the Centre (Annex II) and a report on the scientific work (Annex III) were given to the meeting by Dr. Panikkar and Dr. Hansen. Members of the Consultative Committee expressed their strong approval of the progress which had been made during the past year both in the organization of the Centre and in the scientific programme. Specific discussions were held on the following subjects:

2.1 Staff.

In view of the intention to complete all sorting of IOSN samples taken during the IIOE by the middle of 1966, the Committee considered that the number of sorters at the Centre should be increased to 20 in the near future and that the level of recruitment of these persons should be determined by CSIR on the basis of local policy. This would give a small margin of manpower sufficient to allow for research activities by those sorters who showed aptitude. The Committee was strongly of the opinion that this was a natural and necessary development. The Committee also drew attention to the probable need for additional subordinate staff for the administration, packing, despatching and receiving of sorted samples. It was understood that both these recommendations could be met and that, in the case of the subordinate staff, the employment of local persons would be arranged as the need arose.

The Committee welcomed the appointment by the CSIR of Dr. R. R. Prasad as the Chief Scientist-in-Charge of the Centre in an honorary and part time capacity with effect from 19th March 1964 in addition to his duties as Deputy Director of the Central Marine Fisheries Research Institute at Ernakulam. The Committee felt it to be essential that this arrangement should be changed as soon as possible to enable Dr. Prasad to assume full time duties at the Centre.

2.2. Procedure for sorting plankton samples.

The scheme for the sorting of plankton at the Centre was described by the Curator. A working group was set up to examine the procedures and modifications were suggested. A revised scheme for the sorting of plankton at the Centre is being prepared and will be published.

2.3 Preparation of Station lists

The Curator proposed and the Committee agreed that the publication of station lists should be deferred until a larger number of samples had been sorted. A map, showing the coverage of IOSN samples by ships participating in the IIOE is attached.

The Committee considered a standard format for reporting station information; the final version of this is being prepared and will be distributed by the Centre. The forms would be completed in triplicate, one being placed in the sample, one sent to the Centre and one retained by the scientist in charge of the cruise.

2.4 Plankton Identification

The Committee felt that there was an important requirement for more identification sheets at the Centre. Scientists are asked to send to the Centre copies of identification sheets employed in their own laboratories.

The Committee was informed of the publication of "A key for the identification of the more common planktonic Copepoda of Indian coastal waters" by L. R. Kasturirangan. The proof of a paper entitled "A bibliography of plankton of the Indian Ocean" by R. R. Prasad was also shown to the Committee.

The Committee felt that both these publications were important contributions to the work of the Centre and, further, that the following statement, which appeared in the former publication, (by Dr. S. Husain Zaheer, Director-General of CSIR) should be brought to the attention of all plankton specialists. "I commend this volume to the scientific public in the hope that it will encourage specialists in other groups also to come forward with such field guides and thus create greater interest in field biology."

The Committee was informed that as a general rule Indian scientific publications would accept papers on the Indian Ocean and publish them with little delay. It was suggested that scientists should be encouraged to use this medium for the dissemination of Indian Ocean information, especially as it pertained to the work of the Centre.

2.5 Atlases

The Committee hoped that maps of all physical, chemical and biological parameters for the IIOE would be presented on the same projection and scale. Paper employed for such maps should be of good quality but sufficiently transparent to allow tracing. For plotting plankton data from IOBC, the Committee recommended that the area should be extended to the Antarctic Continent, as suggested at the meeting of IIOE Co-ordinators in Paris, January 1964. The Committee commended the work of Prof. Krey in the preparation of charts showing the types and frequency of plankton observations made during the IIOE and expressed the belief that such charts should be prepared for other disciplines.

The Committee realized that one of the ultimate objectives of the IIOE is the publication of biological atlases, and that the IOBC will play a major role in this effort. It is the Committee's hope that the IOBC will establish a world-wide reputation for work of the highest quality. After a discussion of the subject it was decided to ask the Curator to present the Committee's views to the SCOR working group on atlases.

3. International aspects of work at the Centre

3.1 Contract sorting.

The Committee recommended that the Centre should be encouraged to undertake sorting for other institutions on a contract and payment basis. It was essential, however, that such contract work should not interfere with the sorting of IOSN samples. The Committee were assured that such sorting would be carried out by persons appointed solely for this purpose and that a senior scientist would be delegated specifically to supervise the sorters; he would be instructed initially in his duties by the Curator. It was felt that contract sorting would be particularly important to the Centre following the termination of the IIOE.

3.2 The Consultative Committee

It was felt that the international Consultative Committee should continue in existence after the termination of the IIOE and it was recommended that its membership should be increased to six persons in order to ensure a reasonable attendance at the meetings. It was suggested that SCOR might wish to consider the possibility of nominating a scientist from the Indian Ocean region during the IIOE.

3.3 Training and visits by specialists.

The Committee recommended that specialists should be invited to the Centre to undertake specific research projects and/or to assist in training and advising the staff of the Centre. It was stated that some assistance could be provided by the Centre in obtaining room and board for such specialists. The Committee also welcomed plans to send students from other countries to the Centre to be trained and to assist in sorting.

3.4 Distribution of samples to taxonomic experts.

The Committee hoped that the existing relaxation of regulations for the import and export of plankton samples (as implemented during the IIOE) would be continued after the termination of the expedition. It was considered that the cost of transport for the despatch and return of samples should be borne by the Centre and that each loan should be the subject of a contract between the Centre and the Institute or specialist concerned.

The Committee recommended that the Curator should prepare a summary of the sorted material available for examination by specialists; and that this summary should be sent to national co-ordinators for the IIOE with a request to inform the Curator of the names of specialists who wished to make application to receive parts of the collections. Such applications

should be accompanied by a statement of the proposed programme of study and the period for which the material was requested. The final list of specialists to whom fractions of the sorted material are to be sent should be decided by the Curator in agreement with the Consultative Committee.

The Committee's attention was drawn to the fact that several scientists were at present studying various taxonomic groups from the Indian Ocean and that these persons would be especially interested in material at the Centre. The Committee decided that, where necessary, priority in the examination of sorted samples should be given to scientists who had previous experience of Indian Ocean material or to those who were willing to work at the Centre.

4. Future plans for the Centre

Dr. Panikkar informed the Committee that he sincerely hoped that, after the IIOE, the Centre would form part of a biological division of an Indian Institute of Oceanography. Members of the Committee welcomed these proposals and were assured strongly that the new developments would not prejudice the Centre's responsibility to continue the maintenance and administration of the International Collections.

The Committee considered it essential that the International Collections should be housed at IOBC under the permanent care of a Curator employed on a full time basis. It was noted, however, that the contract with the present Curator, appointed by UNESCO, would expire in March 1965 and that Dr. Hansen might not be available to serve for an extended period. In this event the Committee recommended that a successor should be appointed and paid by UNESCO for the period ending June 1966 when it was anticipated that the sorting of the IIOE samples would be complete.

It was strongly recommended by the Consultative Committee that the Centre be continued as a regional service both for sorting and training after completion of the immediate objective of sorting IIOE samples.

5. Requests to National Co-ordinators for the IIOE.

The Committee noted the discussions on IOBC which appear in the draft report of the IIOE National Co-ordinator's meeting in Paris. The Committee recommended that, in addition to the requests to participants contained in this report, the following items should be brought to the attention of National Co-ordinators:

1) The commitment of IIOE participants to make standard collections with the IOSN and to send them to the Centre. It was the Committee's opinion that this commitment had not so far been adequately fulfilled.

2) That scientists who collected IOSN samples should adhere at all times to the recommended procedure for the collection and preservation of those samples (see Currie, R.I., 1963, "The Indian Ocean Standard Net", Deep-Sea Res., 10:27-32).

3) That national co-ordinators should keep the Centre informed of the names and activities of scientists in their countries who were working on IIOE samples.

6. Library and Equipment.

The Committee recommended that first priority in the purchase of books and equipment for the Centre should be given to those of immediate importance to sorters.

The Committee discussed the expenditure of a UNESCO Contract for a further $5,000* of equipment for the Centre. A list of items urgently required was drawn up for forwarding to the Office of Oceanography, UNESCO.

A working group prepared, and the Committee approved, a list of books for purchase. It was felt that an attempt should be made to obtain photocopies of some of the descriptive publications which are now out of print. Laboratories and individuals are asked to assist in this work by donating their spare volumes or photocopies to the Centre.

7. Information about the Centre.

The Committee considered that a newsletter would be helpful in keeping scientists in other countries and international organizations informed of the progress and needs at IOBC. Discussions would be held between Dr. Panikkar, the Curators, the Consultative Committee and UNESCO as to the method of preparing and circulating such a newsletter.

8. Next Meeting.

It was agreed that the next meeting of the Consultative Committee would be held in January 1965.

*The total support which has been given by UNESCO during the period 1962, 1963 and 1964 is as follows:

Curator and related expenses	$ 40,000
Equipment	$ 20,000
Consultative Committee Meetings	$ 10,000
Total	$ 70,000

ANNEX I

THE INDIAN OCEAN BIOLOGICAL CENTRE
SECOND MEETING OF CONSULTATIVE COMMITTEE

March 18 to 27, 1964.

P A R T I C I P A N T S

Name	Representing
Mr. R.S. Glover, Chairman	Consultative Committee
Dr. M. E. Vinogradov	Consultative Committee
Prof. Sigeru Motoda	Consultative Committee
Dr. J. A. McGowan	Consultative Committee
Dr. N. K. Panikkar	INCOR, CSIR, SCOR representative on IOBC Advisory Board, Director IOBC
Dr. R. R. Prasad	IOBC Advisory Board, Chief Scientist-in-Charge, IOBC
Dr. K. S. Pradhan	Zoological Survey of India, IOBC Advisory Board
Dr. A. Y. Evstafiev	UNESCO/SASCO, UNESCO representative on IOBC Advisory Board
Dr. T. R. Parsons	UNESCO
Dr. R. Serene	UNESCO/SEASCO
Prof. J. Krey	SCOR
Prof. P. N. Ganapati	IOBC Advisory Board
Dr. V. Kr. Hansen	Curator, IOBC

Observers on behalf of National Committees.

Mr. R. S. Glover	-	U.K.
Dr. I. E. Wallen	-	U.S.A. and the Smithsonian Institution
Dr. J. A. McGowan	-	U.S.A.
Dr. N. K. Panikkar	-	INDIA

ANNEX II

THE INDIAN OCEAN BIOLOGICAL CENTRE

ADMINISTRATIVE REPORT

Accommodation:

The Indian Ocean Biological Centre started functioning at Cochin in November 1962. Through the curtesy of the Kerala University, a portion of their Oceanographic Laboratory (about 3200 Sq. ft.) was placed at the disposal of the C.S.I.R. Gradually the laboratory and the office were equipped and the special requirements of the Centre by way of electric fittings, running water facilities, sinks, wash basins, furniture etc. and airconditioning of one of the rooms were provided.

The Curator, Dr. Vagn Hansen, was appointed by UNESCO on 1st April 1963 and after discussions at Paris and Delhi assumed duties at the Centre on 17th April 1963.

With the increase in staff, equipment and stores, the need for additional space was felt and consequently on 21.12.1963 a building with an approximate floor space of 1500 sq.ft. was taken on rent. The office along with the administrative staff moved into the new building. With this, the additional space available in the laboratory was used for the library and setting up a small chemical laboratory.

Furniture and equipment:

All necessary furniture for the scientific staff, office, library and stores and special racks for keeping the samples have been provided and the position in respect of furniture does not cause any difficulty. Office equipment such as typewriters, duplicator, bicycles, clocks, were procured quite early and suitable arrangements have also been made to meet the requirements of stationery articles, labels, log sheets and other data sheets. Scientific apparatus of special types required for chemical work such as chemicals, glasswares etc. are being procured from internal sources and as regards certain items such as vials for keeping the sorted plankton, formalin and hexamine, orders for bulk supply have been placed in view of the large requirements.

Library:

The growth of the library has not been as good as one would like it to be concerning handbooks. On the other hand the stock of periodicals is fairly good, which is largely because of gifts arranged by the Curator from Institutes of foreign countries with UNESCO relationship (ICES, Australia, Denmark, W.Germany, U.K. and S.Africa). The large number of publications received have been bound and the publications ordered for the Centre at the office in New Delhi are expected to be transferred shortly.

Full sets of Indian Museum and Zool. Survey publications have been sent to the Centre from Calcutta. The Library room is to be soon airconditioned and the equipment has been ordered.

Staff:

The present staff position is as follows:

Scientific staff:

1. Senior Scientific Officer Gr.I	....	1
2. Senior Scientific Officer Gr.II	....	1
3. Junior Scientific Officer	....	1
4. Junior Scientific Assistants	....	8
		11

Administrative staff:

1. Junior Accountant	....	1
2. Junior Stenographer	....	1
3. Store Clerk	....	1
		3

Subordinate staff:

1. Laboratory Attendants	....	3
2. Gestetner Operator	....	1
3. Peon	....	1
4. Security Guard	....	1
5. Watchman on daily wages	....	1
		7

2 senior and 2 junior Tesearch Fellows of the Indian National Committee on Oceanic Research are also working at the Centre in addition to the above staff.

The post of Assistant Director of the IOBC was offered to Dr. R. R. Prasad, Deputy Director of the Marine Fisheries Institute, Mandapam, but the Ministry of Food and Agriculture had difficulties in sparing his services. The Government of India, however, has approved a working arrangement by which Dr. Prasad has been posted at Ernakulam and will, in addition to his duties at the Fisheries Institute, function as the Chief Scientist in charge of the Centre.

Preliminary steps in connection with the appointment of a stenographer for the Curator, 3 senior laboratory assistants and 3 laboratory attendants have been completed and they are expected to be in position shortly.

Samples handled:

Up to March 1, 1964, a total of 1079 samples of which 304 were collected with nets other than Indian Ocean Standard Net were received. Of these 249 have been sorted.

Budget figures for the IOBC, Ernakulam

1962-63

Staff - Pay & allowances		Rs. 16,000-00
Contingencies, scientific and office equipment, furniture, etc.		47,000-00
	Total	63,000-00

1963-64

Staff - Pay & allowances		Rs. 70,000-00
Contingencies, scientific and office equipment, furniture, etc.		1,10,000-00
	Total	1,80,000-00

Budget proposed for 1964-65

Staff - Pay & allowances		Rs. 1,40,000-00
Contingencies, equipment and furniture etc.		1,82,000-00
	Total	3,22,000-00

The total for the three years is Rs. 5,65,000-00, equivalent to U.S. $ 119,000 approx.

N. K. Panikkar,
New Delhi,
March, 1964.

ANNEX III

INDIAN OCEAN BIOLOGICAL CENTRE

Report of the Curator.

When the Consultative Committee had its meeting in Febr. 1963, there were approx. 130 samples in stock; it was not known how many samples would be forwarded to the Centre during the coming year.

The input of samples has been considerable. At the 1st of March 1964 there were in stock 1079 samples; 26 from Japan are on the way.

Samples in stock at March 1, 1964.

Country	Total number of samples	Samples taken with non-standard net	Percentage of samples taken with non-standard net
Australia	206	16	7.8 %
India	275	117	42.5 %
Japan	68	0	0
England	44	0	0
South Africa	166	166	100 %
U.S.A.	270	0	0
U.S.S.R.	50	5	10 %
Total	1079	304	28.4 %

A considerable number of samples have been taken by non-standard gears. In order to improve the situation, I.O.S.Nets have been forwarded to the Curator from UNESCO and these may be obtained on request, by ships participating in the IIOE.

Samples taken by standard or non-standard methods have been regarded having equal scientific value. So far 249 samples have been processed.

Future input of samples

The Curator has been informed that approx. 1000 samples will be received from the following countries:

Country	Approx. No. of samples
Australia	150
Japan	94
Germany	230
S.Africa	200
U.S.A.	300
England	50

Procedure.

The sorting is carried out in three steps according to schemes A, B. and C.

Scheme A. Dominance of plankton elements: The 2 or 3 most important plankton groups are estimated visually.

Scheme B. Volumetric composition of the plankton samples: The displacement volume of the total sample is measured. Following this the displacement volumes of 9 groups of organisms are measured or computed.

Scheme C. The sorting: After removing all larger organisms, including fish eggs, fishes and cephalopods, the remaining homogenous sized lot of organisms is subsampled either with Lea's Planktondivider or Folsom's Planktonsplitter, so that a subsample of 3-5 ml is left for sorting. The non-sorted fraction (min. 10% of the sample) will be kept as an "archive". Of the 80 groups listed, 14 are identified, but left in the residue, 5 are composite, and 61 are sorted, counted and stored separately.

Rate of Sorting.

Based on work so far one ml. is sorted in an average of 6.2 man hours. The total time taken to process a sample is approx. 3 days.

The staff.

When the Curator joined in April 1963, 2 jr. scientific assistants started sorting full time. Of the 5 research fellows, 3 were zoologists and did some sorting. The administration was taken care of by the senior scientific Officer. The permanent scientific staff was increased later by one junior scientific assistant (sorter) and one junior scientific officer.

Since the middle of Sept. 1963 the staff has been increased to 11, of whom 8 are jr. scientific assistants, who do the sorting. In the office are 3 staff members and 7 subordinates.

Based on the experience so far, the present staff of sorters will be able to process the 830 samples in stock by the middle of 1966.

Dr. Fedorov, Director of the Office of Oceanography, UNESCO, and Dr. Panikkar have agreed that all samples of the IIOE, sent to the IOBC, should be finally processed by the middle of 1966. Considering the number of samples which will be forwarded to the IOBC (see above), there will be a need for at least 8 additional full time sorters in order to complete the work according to schedule.

Sorting on contract.

The Curator has organized and supervised the contract sorting. From Australia 200 samples have been received of which 25 have been sorted (according to the contract) by 2 M.Sc. students from the Oceanographic Laboratory of the University of Kerala.

V. Kr. Hansen,
Ernakulam,
March, 1964.

INDIAN OCEAN BIOLOGICAL CENTRE

Location 5 squares of zooplankton samples received per March 1, 1964

LEGEND

No. above line = Monsoon observations, total number of samples, 513

No. below line = Inter-monsoon observations, total number of samples, 443

(for 123 samples no positions are available)