

033.429  
GFH/CW

11 MAY 1962

The Secretary of I.O.C.,  
UNESCO,  
Place de Fontenoy,  
Paris 7e. FRANCE.

Dear Dr Wooster,

I think that with the gradual assumption of responsibility by you for co-ordinating the work in the Indian Ocean you should make the announcement about Reference Stations.

I think you could refer to my circular of September 15, 1961, and say that after our London meeting to discuss the replies, three have been designated.

Reference Station 1 at 32°S., 111°50'E.  
2 at 25°S., 40°E.  
3 at 9°S., 105°E.

Reference Station 4 was provisionally decided as 5°N., 69°E. but this and additional ones will be discussed at the regional meetings you plan. You should check with Snider that his meeting did not change Reference Station 2.

You could emphasize the dual idea of seasonal biology at the top and constant chemistry at the bottom, and ask everybody to sample as often as they were in the neighbourhood. I enclose a list of the Australian procedures in case you wish to refer to it. In future Oceanographical Cruise Reports there will occasionally be given a running summary of the results. Final use of the information is probably a matter for individuals and people like the Curator of the I.O.B.C. Perhaps the results should be distributed in the same way as the results of the intercalibrations.

Yours sincerely,

GA

(G.F. HUMPHREY)  
President

Encl.

AUSTRALIAN PROCEDURE AT REFERENCE STATIONS

<u>Reference Station 1</u>	(32°S., 111°50'E.)
S, T, O <sub>2</sub> , nitrate and inorganic P	0, 25, 50, 75, 100, 150, 200, 300, 500, 700, 900, 1100, 1300, and 1500 m and then at 500 m intervals to the bottom.
Total P	As above except 25, 75, and 150 m
Primary production using <sup>14</sup> CO <sub>2</sub>	0, 25, 50, 75, 100, and 150 m
Pigments	As for primary production
Zooplankton	Oblique haul with Clarke-Bumpus sampler : surface - 200 m - surface. Ship speed : 2 to 3 knots. Speed of paying out and recovering wire : 20 m/minute. Duration of tow : 35 minutes.  When the Indian Ocean Standard net arrives, standard tows will be made with it and the catch will be sent to the Indian Ocean Biological Centre.
Miscellaneous	Depth, air temperature (wet and dry), wind, cloud, visibility, sea, swell, and pressure.
<u>Reference Station 2</u>	(9°S., 105°E)
S, T, O <sub>2</sub> , nitrate and inorganic P	0, 25, 50, 75, 100, 125, 150, 200, 250, 300, 400, 500, 700, 900, 1100, 1300, and 1500 m, and then at 500 m intervals to the bottom.
Total P	As above except 25, 75, 125, 150, 250, and 400 m.
Primary production, pigments, zooplankton and miscellaneous as at Reference Station 1.	