

UNITED STATES GOVERNMENT

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Memorandum

TO : Dr. I. E. Wallen, Head, Office of Oceanography
and Limnology, MNH
Through: Dr. R. B. Manning ^{rcm}

FROM : Fenner A. Chace, ~~J.A.~~ Senior Zoologist
Department of Invertebrate Zoology

SUBJECT: Bikini Collections (addenda)

DATE: April 25, 1968

This supplements Dr. Manning's memorandum of August 9, 1967, to Dr. Cowan, which was prompted by the latter's memorandum of July 27, 1967, and originally by Dr. Galler's suggestion that the question of support for studies of the Bikini collections be reopened.

Following is a list of the invertebrate specimens (other than mollusks and insects) collected during the "Crossroads" project of 1946 and the Bikini Scientific Resurvey of 1947.

details of other lists
Duplications

	<u>"Crossroads"</u>	<u>Resurvey</u>
Foraminiferans.....	33	13
Sponges.....	80	10
Hydroids	23	2
Siphonophores	7	
Medusae	2	1
Alcyonarians	6	45
Sea anemones	11	1
Miscellaneous coelenterates	14	
Nemertean worms	2	2
Bryozoans	8	1
Sipunculid worms	58	3
Polychaete worms	728	18
Oligochaete worms	1	
Leeches		2
Miscellaneous worms	8	
Ostracod crustaceans	5	50
Copepod crustaceans	30	
Barnacles	134	1
Stomatopod crustaceans	480	11
Mysidacean crustaceans	861	
Cumacean crustaceans	6	
Isopod crustaceans	150	11
Amphipod crustaceans	73	3
Euphausiacean crustaceans	566	
Decapod shrimps	2,277	262
Lobsters	8	4
Porcellanid crabs		11



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-2-

Hermit crabs.....	795	
Miscellaneous anomuran crabs	192	71
Brachyuran crabs	1,626	1,101
Chaetognaths	65	
Enteropneust worms	10	2
Tunicates	9	1
TOTALS:	<u>8,268</u>	<u>1,626</u>

As noted in Dr. Manning's memorandum, the more than 83,000 specimens sent to outside specialists in 1962 under the ONR-AEC contracts represented nearly all of our unidentified invertebrates from the entire tropical Pacific area prior to 1946, as well as the unidentified "Crossroads" and Bikini Resurvey collections. This action was justified by the likelihood that the release of fission products at Bikini could affect the entire Indo-Pacific fauna and that reliably identified material from throughout the region was a necessary prelude to any studies of faunal changes that might ensue. No formal reports on the collections were demanded of the participants in this program, but several are represented in the following list of publications based at least in part on these and earlier studies on the Bikini collections, and others are in preparation.

- Bayer, Frederick M. 1949. The Alcyonaria of Bikini and other atolls in the Marshall Group. Part I: The Gorgonacea. Pacific Sci., vol. 3, no. 3, pp. 195-210, 6 figs., 4 pls.
- Chace, Fenner A., Jr. 1955. Notes on shrimps from the Marshall Islands. Proc. U. S. Nat. Mus., vol. 105, no. 3349, pp. 1-22, 8 figs.
- Clark, Austin H. 1952. Echinoderms from the Marshall Islands. Proc. U. S. Nat. Mus., vol. 102, no. 3302, pp. 265-303.
- Cooper, G. A. 1954. Recent brachiopods. Geol. Surv. Prof. Pap. 260-G, pp. 315-318, 2 pls.
- Cushman, Joseph A., Todd, Ruth, and Post, Rita J. 1954. Recent Foraminifera of the Marshall Islands. Geol. Surv. Prof. Pap. 260-H, pp. 319-384, 12 pls.

- Garth, John S., and Stephenson, W. 1966. Brachyura of the Pacific coast of America. Brachyrhyncha: Portunidae. Allan Hancock Monogr. Mar. Biol., no. 1, pp. 1-154, 3 figs., 12 pls.
- Hartman, Olga. 1954. Marine annelids from the northern Marshall Islands. Geol. Surv. Prof. Pap. 260-Q, pp. 619-644, 10 figs.
- Holthuis, L. B. 1960. Preliminary descriptions of one new genus, twelve new species and three new subspecies of scyllarid lobsters (Crustacea Decapoda Macrura). Proc. Biol. Soc. Washington, vol. 73, pp. 147-154.
- Holthuis, L. B., and Villalobos F., Alejandro. 1962. Panulirus gracilis Streets y Panulirus inflatus (Bouvier), dos especies de langosta (Crustacea Decapoda) de la costa del Pacifico de America. An. Inst. Biol., Mexico, vol. 32, pp. 251-276, 18 figs.
- Johnson, Martin W. 1954. Plankton of the northern Marshall Islands. Geol. Surv. Prof. Pap. 260-F, pp. 301-314, 16 figs.
- Laubenfels, M. W. de. 1954. The sponges of the West-Central Pacific. Oregon State College, 306 pp., 200 figs., 12 pls.
- Manning, Raymond B. 1967. Review of the genus Odontodactylus (Crustacea: Stomatopoda). Proc. U. S. Nat. Mus., vol. 123, no. 3606, pp. 1-35, 8 figs.
- Manning, Raymond B. 1967. Notes on the demani section of genus Gonodactylus Berthold with descriptions of three new species (Crustacea: Stomatopoda). Proc. U. S. Nat. Mus., vol. 123, no. 3618, pp. 1-27, 8 figs.
- Sears, Mary. 1950. Notes on siphonophores. 1. Siphonophores from the Marshall Islands. Sears Found. Journ. Mar. Res., vol. 9, no. 1, pp. 1-16, 2 figs.

Stephenson, William, and Rees, May. 1967. Some portunid crabs from the Pacific and Indian oceans in the collections of the Smithsonian Institution. Proc. U. S. Nat. Mus., vol. 120, no. 3556, pp. 1-114, 38 figs., 9 pls.

Wells, John W. 1954. Recent corals from the Marshall Islands. Geol. Surv. Prof. Pap. 260-I, pp. 385-486, 92 pls.

Yaldwyn, John C. 1962. A new Pasiphaea (Crustacea, Decapoda, Natantia) from southern Californian waters. Bull. Southern California Acad. Sci., vol. 61, pp. 15-24, 19 figs.

Outside specialists who were sought to implement the purposes of the ONR-AEC contracts were offered token honoraria ranging from 100 to 700 dollars, half to be paid when half of the material had been identified and the remainder on the return of the identified collections. A purchase order (No. 33767) for \$4,500 was established in the Fiscal Division to cover these honoraria. As of November 30, 1965, a total of \$1,750 had been disbursed, leaving a balance of \$2,750. I do not recall that any honoraria have been paid since that date. Of the purchase-order amount, \$1,500 was allocated for amphipod identifications by Dr. J. L. Barnard, but Dr. Barnard discovered that he could not discharge the commitment in a reasonable length of time, and his contract was cancelled. Inasmuch as permission was denied to distribute this \$1,500 among other participants already under contract, that sum will presumably remain unallocated and available for work on other groups, if and when specialists can be found.

If further faunal investigations of Bikini are contemplated, serious attention should be given to means of promoting interest in the invertebrate collections. I doubt very much that such interest could be engendered in most of the small number of competent invertebrate specialists unless the investigation assumed crash-program proportions, with subsidies so generous that they could not be ignored. Certainly the progress achieved thus far under the existing contracts indicates that token honoraria will not get the job done without extensive delay; at least one of

Dr. I. E. Wallen

April 25, 1968

-5-

the more conscientious investigators was insulted by the fact that the honorarium was insufficient to cover the necessary supplies and subprofessional assistance, while others were unable to accept an honorarium without jeopardizing their permanent positions. It seems to me that the purpose of the original contracts has been at least partially fulfilled in providing documented pre-1946 collections with which more recent material can be compared as it accumulates. To pursue the matter further without many more invertebrate specialists than are now available would be likely to delay or eliminate monographic studies which should have top priority.