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Bikini Collections

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Thanks to the diligence of Fenner A. Chace, Jr., one of the principal investigators on the AEC-supported investigations of the tropical Pacific fauna, I can provide some information on the status of studies on the Bikini collections. Material shipped out to specialists in 1962 under the AEC program was not restricted to specimens from Bikini, but included specimens from localities all over the tropical Pacific area. It would be very difficult to determine the status of the Bikini collections alone.

1-3. Collections identified in whole or in part:

A. Identifications completed:

	<u>No. of Specimens</u>	
barnacles	156+	Dora P. Henry
cumaceans	739	N. S. Jones
holothurians	800+	E. Deichmann
*lobsters	29+++	L. B. Holthuis
oxystoma crabs	2260	T. Sakai
*pasiphaeid shrimp	100+	J. C. Yaldwyn
porcellanid crabs	1757	Janot Haig
*portunid crabs	1924	W. Stephanson
*shrimp (5 families)	3005	F. A. Chace, Jr.
stomatopods	2362	R. B. Manning
*mollusks	?????	Div. staff

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Of these groups, only those marked with an asterisk have been incorporated into our collections. The remainder of the material awaits processing.

B. Identifications partially completed:

	<u>No. of Specimens</u>	
alcyonaceans	550	H. Utinomi
ascidians	101	T. Tokioka
bryozoans	??	J. D. Soule
euphausiid shrimps	44000	B. P. Boden
grapsoid crabs	1427	D. Guinot
*hermit crabs	8105	J. Forest
hydroids	365	R. C. Vernon
ophiuroids and echinoids	3617	F. Ziesenhenné
salps	1000	L. Berner
sipunculid worms	832	A. C. Stephen
sponges	949	W. D. Hartman
tanaids	733	K. Lang
*xanthid crabs	8941	J. S. Garth

The asterisk next to a group in list B indicates that some of the specimens have been returned; those returned have not yet been processed into our cataloged holdings.

Although J. L. Barnard worked with some of the Amphipoda from these collections approximately 50,000 specimens are still awaiting study.

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Specialists were not available to study the remainder of the invertebrate groups, including many of the decapod shrimps, the crinoids and asteroids, the mysids, the corals, and most of the worm groups.

4. Methodology for assembling information on the Bikini pre-test collections:

Information on the numbers of specimens received from Bikini under each transaction could probably be provided by the Registrar's Office; two of the numbers involved are 172224 and 172536. With this information the records and specimen holdings of each division would have to be examined to determine the disposition and present location of the materials. It would be a very time-consuming operation to obtain this information, perhaps more complicated than the accumulation of information on Antarctica carried out by the Sorting Center several years ago.

5. Amount of study needed to complete the project:

I am not certain there is a good answer to this question. Specimens from the Pacific area were sent out to specialists in 1962, and as can be seen from list B above, many of the specimens have not been identified in the last five years. Few studies have been published that specifically treat the Bikini material. Limiting factors in this operation would seem to be the paucity of specialists and lack of time for the specialists to make routine identifications.

6. Additional support for curatorial activities:

Many of the invertebrates identified under the auspices of the AEC program have not been processed into our collections. The exception is in the Mollusca, where thousands of specimens were incorporated into the general holdings by Dr. Rosewater when he joined our staff in 1959.

It is anticipated that the return of the remainder of the 31,000+ non-molluskan specimens sent out for identification under the AEC program will place a great strain on our already overworked technical

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staff and on our budget. The expense in jars alone will be enormous; we can anticipate receiving enough separate lots to fill between 20,000 and 30,000 jars, far in excess of our current stock of jars. Our standard 8 oz. jar now costs \$0.55 apiece.

Processing of the uncataloged, identified materials now on hand, ca. 8,000+ specimens, will represent at least one man-year of work (the specimens represent 2,099 lots shipped, probably 3,500+ lots after identification; these are estimates). The outstanding 20,000+ lots represent 8-10 man-years of effort to catalog.

Under our present cataloging system, information on distribution cannot be abstracted from the cataloged collection without searching the collection by hand. It would be a step forward if we could obtain support to convert existing records on the Pacific invertebrates into a format retrievable by automatic methods. This would form an excellent adjunct to the current data-processing study supported by the Office of Education.