to make far more precise calculations about the orbit without some of the assumptions which had to be made in the Jodrell calculations. Further, it must be emphasized that a miss distance of 1500 km was within the accuracy of our orbital computations.

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A Collector on Sagami Bay

May I call attention to the following publication: *A Review of Hydroids of the Family Clathrozonidae with Description of a New Genus and Species from Japan.* Hirohito, Emperor of Japan. In English, 16 pp.; in Japanese, 14 pp. 1 color sketch, 1 map, 14 plates (Biological Laboratory, Imperial Household, Tokyo, 1967).

This is a remarkable publication, although it looks like a reprint from some humble journal of systematic zoology. It is remarkable because of its being a scientific paper of a sovereign. The Emperor openly signs his name and takes responsibility as the author. As far as I know, there is no precedent of this sort, at least in the field of biology.

It is well known that Emperor Hirohito has a great interest in biological study. He has a laboratory in the compound of the palace in Tokyo. He goes there regularly every Saturday —and occasionally Thursday—afternoon unless his schedule is disturbed by some official function. He uses every odd hour available for his biological study.

The Emperor has a villa at Hayama, a seaside resort near Kamakura, where he spends his leisure hours in various seasons. Here he has a boat with equipment for collecting marine animals. During his stay in this villa, he frequently goes out collecting. I have had some chances to accompany the Emperor on such occasions. I found him to be a superb collector, observant, patient, and physically robust. In looking for littoral animals, he turns every stone and looks into every crevice. On board the boat, he closely examines debris dredged up from the bottom of the sea for any minute organism. It is also his habit that, after selecting materials of interest, he carefully returns stones to their original positions, leaving a part of the material attached to them, and he throws the dredged debris overboard to allow the minute organisms to thrive in their home.

Such being the Emperor's habit for many years, a good many specimens of various marine forms have been accumulated in the museum of his biological laboratory. Sagami Bay, where most of the Emperor's materials were collected, has been famous among foreign biologists for richness and variety of marine animals, especially through works by D. S. Jordan, B. Dean, F. Doflein, and others.

Abundant collected materials are sorted by the Emperor's biological assistant, and groups are sent to specialists to be studied. *Opithobranchia of Sagami Bay* (1949. 194 pp., 50 plates), its supplement (1955. 59 pp., 20 plates) by K. Baba, *Ascidians of Sagami Bay* (Iwanami, Tokyo, 1955. 315 pp., 80 plates) by T. Tokioka, and *The Crabs of Sagami Bay* (Maruzen, Tokyo, 1965. 298 pp., 100 plates) by T. Sakai are the results of such studies. Other publications of the same nature, on molluscs, gorgonids, asteroids, and other groups are forthcoming.

In addition, some forms of special phylogenetic interest were subjected to special studies, for instance: *Atubaria heterolopha,* a sheathless cephalodiscoid [T. Sato, *Zool. Anz.* **115** (1942); T. Komai, *Proc. Jap. Acad.* **25**, 19 (1949)] and *Lyrocteis imperatoria,* a large and beautiful sessile ctenophore (T. Komai, *Mem. Coll. Sci. Univ. Kyoto Ser. B* **17**, 1–36, 3 plates).

The present memoir forms part of the results of the Emperor's own painstaking studies over many years. Indeed, his preference for hydroids over other groups dates back nearly four decades. I remember that in June 1929, when I had a chance to accompany him on a trip collecting littoral animals along the Kii peninsula, he showed great interest in hydroids. The specimens of this group preserved in the museum of the Emperor's biological laboratory are certainly, in quantity and in quality, exceptional among collections in the museums of the world. The numerous fine slides of these forms preserved in a cabinet standing beside his working desk are also superb.

This memoir deals with the rare hydroids of the family Clathrozonidae that were known only from South Australian and Antarctic waters. The systematic affinity of this family had been disputed among previous authors, because the hydroids belonging to it have some characteristics eligible to the suborder Athecata and other characters

showing affinity to the suborder Thecata. More recent authors were inclined to the view that the family should be included in the Athecata.

The Emperor obtained abundant specimens of two species of this family from Sagami Bay, and assigned one of them to *Clathrozoon wilsoni* Spencer, and the other to a new genus and species, *Pseudoclathrozoon cryptolaroides*. He describes these two species in detail with many illustrations including a color sketch of a specimen of the new species, many photographic figures of whole colonies of the two species and of sections of fixed specimens indicating zooids, skeletons, and coenosarcs, as well as fine diagrammatic figures of the structure of the colony, and a map of the part of Sagami Bay from which the specimens came.

The descriptions are given in both English and Japanese, in more detail in the former language. What is the most salient of the new discoveries made by the author is the presence of gonothecae containing gonosomes of the leptomedusan type. By this discovery the systematic position of the family Clathrozonidae is settled as to be included in the suborder Thecata.

In the preface of this memoir, cordial appreciation is given to many who have given assistance to the author in one way or another. Outstanding among the scholars was the late Hirotarô Hattori, who was the Emperor's tutor and consultant in biology for more than 50 years. The preface closes with the following words: "I should be more than happy if the present work of mine, subject to correction by interested scholars, could contribute even in the smallest way to the progress of academic studies."

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Negroes at Michigan

The findings of the Coleman Report (*1*) should be considered before adjudging that the University of Michigan is for "rich white students" as noted in Nelson's elegantly entitled report "Michigan: Ruckus over race has relevance to other universities" (2 June, p. 1209). The report points out that there is a difference of one standard deviation between the median scores of large numbers of white children as compared to large numbers of Negro children (p. 20, summary report). The University of Michigan, like any other good university, tries to screen its candidates for admission, admitting, preferably, only those making scores that fall within the upper quarter of the high school graduating class.

By use of standard statistical tables we can compute that for a one S.D. difference in the medians the 75 percentile of the normal (or white) group is overlapped only by the 95 percentile of the Negro group. If Michigan's Negro population were 10 percent and if the entire student body of the University of Michigan came from students with intelligence test scores in the upper 25 percent of students within the state, we would expect to find (.1) (.05) or (.005) of the student body or 150 of the 30,000 students to be Negro. The article estimates that 450 students are Negro, so if there is any discrimination against Negro students, these figures do not bear it out.

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Reference

1. J. S. Coleman, E. Q. Campbell, A. M. Mood *et al., Equality of Educational Opportunity* (Government Printing Office, Washington, D.C., 1966).

The Fuzziness of "Fuzz"

The cynic has said that electron microscopes are adding more problems for the working biologists than they are helping to solve. On the plus side, more details of fine structure are being revealed as more varieties of cells are examined by improved methods of higher magnifications. Even if this is no more than extending the frontiers of our ignorance, as one skeptic puts it, whenever a new morphologic feature comes to the attention of the electron microscopist a major problem is presented to him; he needs to give the newly discovered thing an identity—a name, and this problem is often resolved by the use of the word "fuzz."

The outer surfaces of cells reveal complexities of structure when examined with high resolutions of the electron microscope. Often, fine filaments or thread-like structures extend outward from the cell membrane. First recognized on the surface of gall bladder epithelium by Yamada, the filaments were given the name of "Anten-