<table>
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<th>Title</th>
<th>THE SETO MARINE BIOLOGICAL LABORATORY OF KYOTO UNIVERSITY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Author(s)</td>
<td>Miyadi, Denzaburo; Utinomi, Huzio</td>
</tr>
<tr>
<td>Citation</td>
<td>PUBLICATIONS OF THE SETO MARINE BIOLOGICAL LABORATORY (1952), 2(2): 41-52</td>
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<tr>
<td>Issue Date</td>
<td>1952-10-05</td>
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<td>Textversion</td>
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Kyoto University
THE SETO MARINE BIOLOGICAL LABORATORY
OF KYOTO UNIVERSITY*

DENZABURO MIYADI (Director)
and
HUSIO UTINOMI (Superintendent)

With Plates II-V

HISTORICAL SKETCH

1922 Laboratory established at the village of Seto-kanayama (Sirahama Town now named), Wakayama Prefecture. Whole buildings completed in spring and actual activities began in summer (July 28) under the directorship of Prof. T. KAWAMURA.

1923 Prof. T. KOMAI elected Administrator of the Laboratory.

1929 His Majesty the Emperor visited the Laboratory on the way of his journey to Kansai districts. Aquarium attached to the Laboratory began to open to the public and then enlarged.

1934 Prof. Yo K. OKADA elected Administrator of the Laboratory.

1935 Research ship the “Nyūsin-maru” sold and a new motor boat the “Pelagia” arrived.

1937 Prof. T. KOMAI elected again Administrator of the Laboratory the name of which was henceforth altered to Director by the reform of government organization.

1944 Amargamation of the Memorial Museum of Natural History at Seto-kanayama with the Laboratory. The former was rebuilt after removal to the site of the Laboratory.

1946 Prof. D. MIYADI elected Director of the Laboratory.
Many of laboratory buildings and their equipments damaged by great earthquake shock on December 21th.

* Contributions from the Seto Marine Biological Laboratory, No. 175.

1948 Research laboratory and aquarium buildings rebuilt.
1951 Students’ laboratory renovated.

**STAFF**

**PRESENT PERSONNEL**

**Scientific Staff**

Director (*Part-time*): Prof. Denzaburo Miyadi, M.Sc., D.Sc., M.J.S.C. (Ecologist)
Superintendent: Huzio Utinomi, M.Sc., D.Sc. (Zoologist)
Scientific Officers: Takasi Tozooka, M.Sc., D.Sc. (Zoologist and planktologist)
Isamu Yamazi, M.Sc. (Hydrologist and planktologist)
(Non-resident) Tokubei Kuroda, D.Sc. (Malacologist)
(Part-time) Tadashige Habe, M.Sc. (Malacologist and ecologist)

**Laboratory Staff**

Skipper and Collector (*Temporary*): Yanosuke Sakai.
Engineer and Collector: Syuzi Ura and Syozo Sakai.
Laboratory assistant (*Part-time*): Torao Yamamoto.
Typist and Clerical assistant: Miss Yoshiko Mori.
Janitor and Cook: Toyomatu Tuzi.
Housekeeper: Mrs. Kikue Tuzi.
Other 3 temporarily appointed aquarium attendants.

**FORMER PERSONNEL**

**Director**

Tamiji Kawamura, Prof., M.Sc. (*Rector of Pref. University of Siga, Hikone*) 1922-23
Taku Komai, Prof., D.Sc., M.J.A. (*Chief member of National Institute of Genetics, Misima*) 1923-33, 1937-46
Yō K. Okada, Prof., M.Sc., D.Sc., M.J.A. (*Formerly Dean of Science Faculty, Tokyo University, Tokyo*) 1933-37

**Scientific Staff**

Jiro Ikari* (*Deceased in July 1937*) 1922-31
Kōzō Akatsuka (*Lecturer of Prefectural University of Mie, Tu*) 1922-33
Iwao Taki, M.Sc., D.Sc. (*Professor of Hiroshima University, Mukaizima*) 1928-31
The Seto Marine Biological Laboratory

Hisao Sugino, M.Sc. (Professor of Osaka University of Liberal Arts, Osaka) 1931
Sueo M. Shiino, M.Sc., D.Sc. (Professor of Prefectural University of Mie, Tw) 1931–36, 1941
Yoshinobu Miyashita.* M.Sc. (Deceased in July 1942) 1932–35
Yasuhiro Tokuoka (Researcher of Nihon Yusi K.K. Research Institute, Kawasaki) 1934–38
Kiyoshi Hirabayashi, M.Sc., D.E. (Ass’t professor of Institute of Chemical Research, Kyoto University, Takatuki) 1934–38
Denzaburo Miyama, M.Sc., D.Sc. (Professor of Kyoto University, Kyoto) 1936–42
Kanehumi Nozawa,* M.Sc., D.Sc. (Deceased in February 1946) 1939–41, 1942–46
Tetsuo Masui* (Deceased in October 1942) 1940–42
Sōchirō Sakaguchi (Wakayama) 1942–46
Nobuyuki Takeda, M.Sc., D.Sc. (Formerly Professor of Prep. Department of Syowa Medical College, Tokyo) 1942, 1944–47
Miss Chiyoko Kasuya (Mrs. N. Takeda) 1943–47
Yoshiichi Matsui, D.Ag. (Director of Nippon Institute for Scientific Research on Pearl, Kyoto) 1946–48
Miss Miho Ikari (Teacher of Hotaiman High School, Hotaiman) 1947–50
* Deceased

LOCATION

The Laboratory is located on a little peninsula on the west coast of Kii Province, about 40 miles northwest of Sio-no-misaki, the southernmost promontory of the main island of Japan and about 80 miles south of Osaka. The site is formerly named Seto-kanayama as village and now Sirahama Town since 1940. The town is well known as a hot-spring place with beautiful landscape and natural monuments, and many tourists at home and abroad visit for sight-seeing and taking a bath.

In addition, the marine life in the environs, littoral as well as pelagic, is characterized by its tropical faces and also by the richness and diversity in forms. This is due to the influence of a northerly branch of the “Kurosio” current washing along the west coast of Kii Peninsula, and also to the profuse indentations of the sea floor. The location of the Laboratory furnishes naturalists with excellent working grounds and is thus available as a base for wide-range field work involving both the terrestrial and marine biology in southern Honsyu.

During the thirty years since its establishment, various improvements have been made, and the Laboratory is now becoming one of the centers for the promotion of marine science in Japan.
The area belonging to the Laboratory covers about 33,680 sq. m. on the tombolo hemmed in between the sea on the north and south. The Laboratory as a whole consists of ten separate buildings. They are all flat wooden houses, except only the museum being of two-stored.

<table>
<thead>
<tr>
<th>Building</th>
<th>Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>Research laboratory</td>
<td>1 (303 sq.m.)</td>
</tr>
<tr>
<td>Special research laboratory</td>
<td>1 (168 sq.m.)</td>
</tr>
<tr>
<td>Students' laboratory</td>
<td>1 (224 sq.m.)</td>
</tr>
<tr>
<td>Aquarium</td>
<td>1 (407 sq.m.)</td>
</tr>
<tr>
<td>Museum</td>
<td>1 (218+204 sq. m.)</td>
</tr>
<tr>
<td>Dormitories</td>
<td>2 (302 sq.m., 173 sq.m.)</td>
</tr>
<tr>
<td>Official residences</td>
<td>3 (221 sq.m.)</td>
</tr>
</tbody>
</table>

The main laboratory contains twelve rooms of concrete floor: an office, library, instrument-working room, storage room, photographic dark room, physiological room, chemical room, oceanographical room and three individual research rooms, seven of which are supplied with running fresh and salt water fittings, and a wide cement sink, and also with electric light and power (3-phase, 110/220 volts, 60 cycle). Equipments for general biological and hydrological researches are mostly available. For collecting material and work on the sea there are at present two vessels, one called the "Janthina II" of 3 tons capacity, equipped with a 7.5 h.p. Diesel gas engine and a row boat called the "Obelia".

Besides these, the Laboratory has now been equipped with improved facilities for regular meteorological observations.

The Laboratory was established primarily to provide facilities for research in marine biology and also to give students in that university laboratory courses in marine biology. Since the war, however, the Laboratory has been opened for a course in marine biology and elementary oceanography to undergraduate students in other universities or colleges and to teachers of biology in public schools of lower grade, mainly from April to August. During the spring and summer vacations of every year, the Laboratory is crowded with many enthusiastic students.

The course is regularly conducted by members of the laboratory staff and by teachers of other schools attended. Usually it consists of lectures, laboratory exercises, field works, collecting trips and discussions. During the course some pamphlets for guide to exercises printed by the Laboratory are freely used. Since the war, students and teachers attended to these courses have successively been increased year after year, as follows.
**The Seto Marine Biological Laboratory**

<table>
<thead>
<tr>
<th></th>
<th>Schools or parties</th>
<th>Days</th>
<th>Attendants</th>
</tr>
</thead>
<tbody>
<tr>
<td>1946</td>
<td>6</td>
<td>20</td>
<td>72</td>
</tr>
<tr>
<td>1947</td>
<td>8</td>
<td>36</td>
<td>103</td>
</tr>
<tr>
<td>1948</td>
<td>18</td>
<td>67</td>
<td>196</td>
</tr>
<tr>
<td>1949</td>
<td>19</td>
<td>80</td>
<td>397</td>
</tr>
<tr>
<td>1950</td>
<td>13</td>
<td>62</td>
<td>312</td>
</tr>
<tr>
<td>1951</td>
<td>23</td>
<td>90</td>
<td>370</td>
</tr>
</tbody>
</table>

Besides, the following is the number of visitors working at the Laboratory in recent years since the war.

<table>
<thead>
<tr>
<th></th>
<th>1946</th>
<th>1949</th>
<th>1950</th>
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<tr>
<td>1946</td>
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<td>1947</td>
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<td>1951</td>
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</table>

Research work by members of the laboratory staff has been proceeding actively. In other respects also the Laboratory offers special facilities for instruction in marine science, and thus promotes for the advancement of marine research in our country.

**LIBRARY**

The Library contains many of the important marine biological journals, several thousand reprints and about 2000 bound volumes. The reports of expeditions, monographs and other books not found in the Library have temporarily been borrowed from the Zoological Institute of Kyoto University at Kyoto. The recent valuable additions to the Library include a complete set of algological and planktological books and reprints belonging to the late Jiro Ikari, one of the founders of the Laboratory. The Library has lately been much used by visiting workers or students in other universities.

The number of periodicals or reprints of papers being regularly received by the Library has been appreciably increased during recent years by gifts or exchanges. Thanks of the Laboratory are due to many Departments or Institutions at home and abroad for their gifts and courtesies presented to the Library. The following is a list of the periodicals and publications received since the end of War II. Subtitles of journals and reports in Japanese are given in the original form as well as in explanatory English translation if no accepted translation could be found.

**AUSTRALIA**


Memoirs Queensland Museum, Brisbane.

BELGIUM


BERMUDA


CANADA

Annual Report, Fish. Board of Canada, Ottawa.
Stat. Biol. St-Laurent, Québec. (Contributions)

CEYLON

Fish. Res. Station, Colombo. (Reprints)

CHINA

Amoy Fisheries Bulletin, Amoy.

DENMARK


EGYPT


FINLAND

Zool. Station, Tvärminne. (Contributions)

FRANCE


FRENCH WEST AFRICA

The Seto Marine Biological Laboratory

Initiations Africaines, Dakar.

GERMANY

Helgoländer Wissenschaftliche Meeresuntersuchungen, List auf Sylt.
Kieler Meeresforscgungen, Kiel.
Senckenberg am Meer, Wilhelmshaven.
Veröffentlichungen Inst. Meeresforschung, Bremerhaven.

GREAT BRITAIN

Dept. Zool., Univ. Coll., Hull. (Reprints)
Dept. Zool., Univ. of Cambridge, Cambridge. (Reprints)
Dept. Zool., Univ. of Edinburgh, Edinburgh. (Reprints)
Dept. Zool., Univ. of Manchester, Manchester. (Reprints)
Hull Bulletins of Marine Ecology, Hull.
Report, Dove Marine Lab., Cullercoasts, Newcastle.
Scottish Sea Fisheries Statistical Tables, Scottish Home Dept., Edinburgh.
Statistical Tables, Sea Fisheries, Min. Agr. & Fish., London.

HOLLAND

Amsterdam Naturalist, Amsterdam.
Zoologische Mededelingen, Leiden.
Zoologische Verhandelingen, Leiden.

INDIA

Freshwater Biol. Stat. Madras Fisheries, Madras. (Reprints)

INDOCHINA

Inst. Oceanogr. Indochine, Nhatrang. (Contributions)

INDONESIA

Treubia, Bogor.
ITALY

Bibliographia Oceanographica, Roma-Venezia.
Bollettino Pesca Piscicolt. Idrobiol., Roma.
Nova Thalassia, Venezia.

JAPAN

Animals and Zoo (どうぶつく動物園), Tokyo.
Bull. Fac. Fish. Hokkaido Univ. (北海道大學水產學部研究彙報), Hakodate.
Bull. Kobe Marine Observatory (神戶海洋氣象台彙報), Kobe.
Bull. Maizuru Marine Observatory (舞鶴海洋気象台要報), Maizuru.
Bull. Nagasaki Marine Observatory (長崎海洋時報), Nagasaki.
Bull. National (or Tokyo) Science Museum (國立科學博物館研究報告), Tokyo.
Central Fish. Exper. Stat., Tokyo. (Contributions)
Ecological Review (生態學研究), Sendai.
Fish. Lab. Fac. Agr., Tokyo Univ., Sinmaiko-Ikawazu (Contributions)
Icones Marine Animals & Plants in Hokkaido (北海道海洋動植物圖譜), Yoiti.
Illust. Catalogue of Japanese Shells (日本貝類圖錄), Kyoto.
Jour. Fac. Fish. Pref. Univ. of Mie (三重縣立大學水產學部紀要), Mie.
Jour. Fisheries (水產學雑誌), Hakodate.
Jour. Kagoshima Fish. Coll. (鹿兒島水產專門學校研究報告), Kagosima.
Jour. Shimonoseki Coll. Fish. (第二水産講習所以研究報告), Shimonoseki.
Jour. Tokyo Univ. Fish. (東京水產大學研究報告), Yokosuka.
The Seto Marine Biological Laboratory

Museum Studies (博物館研究), Tokyo.
Nanki Seibutsu and its Supplement (南紀生物), Sirahama.
Natural Science and Museums (自然科学と博物館), Tokyo.
Oceanographical Chart (海洋図), Tokyo.
Oceanographical Data (海洋速報), Maizuru.
Oceanographical Reports (海洋報告—海洋時報), Maizuru.
Oceanography and Meteorology (海洋と気象), Nagasaki.
Physiology and Ecology (生理生態), Kyoto.
Reports and Preliminary Study, Natural Resources Section, SCAP, Tokyo.
Rep. Fac. Fish. Pref. Univ. of Mie, Tu.
Science of the Sea (海洋の科学), Tokyo.

JUGOSLAVIA

Acta Adriatica, Split.

— 9 —
New Zealand

Bulletin Auckland Inst. and Mus., Auckland.
Records Auckland Inst. and Mus., Auckland.
Report on Fisheries, Marine Department, Wellington.

Norway

Fiskeridirektoratets Skrifter, Ser. Havundersøkelser, Bergen.
Hvalradets Skrifter, Oslo.
Tromsø Museums Årsheder, Tromsø.
Univ. i Bergen Årbok, Naturvitenskapelig Rekke, Bergen.
Univ. i Bergen Årsberetning, Bergen.

Portugal


South Africa

Annual Report, Division of Fisheries, Sea Point.

Spain

Boletín Inst. Español Oceanografía, Madrid.

Sweden

Arkiv för Zoologi, Stockholm.
Meddelanden Oceanografiska Institutet, Göteborg.
Undersökningar över Öresund, Lund.
Zoologiska Institutionen, Lund. (Contributions)

Thailand


Tunisia


Turkey


U.S.A.

Allan Hancock Pacific Expeditions, Los Angeles.
American Museum Novitates, New York.
PUBLICATIONS

The outcome of researches made at the Laboratory has been published in the own journal "Publications of the Seto Marine Biological Laboratory" (commenced in 1949) and other periodicals at home or abroad. Several of them are being selected and sent regularly to the marine laboratories, institutions, museums, departments, etc., in exchange, under the subtitle of "Contributions from the Seto Marine Biological Laboratory", formed of two separate series, of articles in foreign and Japanese languages (Vide infra).
EXPLANATION OF PLATES II—V

PLATE II


PLATE III

Fig. 2. Aerial view of Tanabe Bay from the south.

Fig. 3. General view of Kanayama Bay and Seto Peninsula, showing the site of the Laboratory (S.M.B.L.).

PLATE IV

Fig. 4. Research laboratory.

Fig. 5. Special research laboratory.

PLATE V

Fig. 6. Students' laboratory.

Fig. 7. Aquarium.
Fig. 1
D. Miyadi & H. Utinomi: The Seto Marine Biological Laboratory.
D. MIYADI & H. UTINOMI: The Seto-Marine Biological Laboratory.
D. Miyadi & H. Utinomi: The Seto Marine Biological Laboratory.