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<th>項目</th>
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<tbody>
<tr>
<td>Title</td>
<td>大村湾の海洋学的並びに浮游生物学的性状に関する研究（予報 上）の水塊区分に就いて</td>
</tr>
<tr>
<td>Author(s)</td>
<td>入江 春彦 飯塚 昭二</td>
</tr>
<tr>
<td>Citation</td>
<td>長崎大学水産学部研究報告 1954年2月28日発行</td>
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**NAOSITE**: Nagasaki university’s Academic Output SITE

http://naosite.lb.nagasaki-u.ac.jp
Studies on the oceanographic and planktological characteristics of the Bay of Omura. (Preliminary) On the water masses division of upper layer.

Haruhiko IRIE and Shoji IIZUKA

The authors carried on oceanographic observations of the Bay of Omura during summer months from May to October 1952. From a viewpoint of distribution of temperatures and chlorinities, especially in upper 15m layer, concluded as follows.

During this period, upper layer of the Bay of Omura was divided into 3 areas.

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I 緒 言

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「潮」の発生前1～2日の漁業者の所謂「潮先」（shio-zaki）では平日以上の漁獲があるが、「潮」
の発生後急激に漁獲が低下して彼が約10～15日間続いた後再び漸次回復する。

この事は1947年8月の「潮先」に於いても辻田が指摘している。 「潮先魚類」としてはチヌ・
コチ・カレイ・エビ・ハゼ・シャコ等で、「潮」の去った後の所謂「潮後」（shio-jiri）には魚類
は殆どと見られず、たと龟類（ヒトトシ類・ウナ類・多毛類等を総称して漁業者が呼んでいる）
が補塡されるだけである。

「潮」が発生しても「潮先」を追跡出来れば漁獲は確保される訳で、辻田は「潮」の移動が水
塊の流動と明かに一致していると報告しているが、漁業者は「潮」の動きは無方向的であるとし
ている。

「潮」の発生原因及びにその移動の様相を知る為には、前年に亘って可能な限り頻繁に観測を
行い、特に「潮」発生前後の海況に関する観測値にに関する事が要求され、又水塊区分及び夫等の相
互関係を明らかにする事が必要である。

水塊区分に就いては大村湾内に関しては水平及び垂直の isolines により安井等32・辻田等33,35・
加藤等37) が行って居り、又永井38)は外洋（東支那海）域に於いて T-S diagram を樹立に区分
して夫等の毎日に点数表示をする方法を用い観測値を相対的関係に置換えて適切な区分を行っ
ている。著者等は先づ大村湾の水塊区分を巨視的に知る為に、観測値を直接用いる観測日時に時
間的の観測のある或る期間に比較的頻繁に同区域で得られた観測値を総括的に見て、潮沼の性
格を多分に持つ外洋との連絡口の極めて小さな内湾の巨視的な水塊区分を探察する一方法として、
1952年5月から同年10月に至る夏半年間に7回に亘って行った観測で得た水温及び塩素量の数
値に於ける有毎を取扱いを施して、大村湾内水塊の巨視的且つ相対的な区分を行った。

Ⅲ 万 法
観測は湾内に15点（Tab. 1）を設定し、1952年5月6～8日・6月3～4日並びに21～22日・7月
5～6日並びに24～25日・8月28～30日及び10月4～5日の7回次行った。（Tab. 2 & 3）

Tab. 1. Stations occupied

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<th>Lat. (N)</th>
<th>Long. (E)</th>
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1. 水 温
Tab. 2 の各観測回次各層の計数は観測製水温の相数で、此等を各層毎に水温の高い
ものを前後各点に1から順次番号をつけ、同値のものには同番号をつけて各々中層の計数を得た。
観測値を総括するに當って各回次各点各層の数値に均等な重みを持たせる事が必要であるが、
Tab. 2 から明かに観測値を欠いた点及び層があり此のまゝの場合では重みに均等を欠くので、
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Oct., 4~5.

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Average

|       | 11         | 9 8 5 2 1 10 4 6 12 13 7 15 3 14 |

此等を此均等化して各表次各層毎の順位が1から15迄の間に均等な重みを分配する様に、未調整順位（表中段の数字）を x、調整順位（表下段の数字）を y とし、各表次各層毎に \( y = a + bx\) なる二元一次式により表中の順位に調整を行って下段の数値を得た。調和値としては 15m 以深は当然に底層に達ぶが、15m 層と底層とはその点の深度により極差が大きさがあり、その為による誤差の導入されるものを避ける為に、此の取扱いに於いては 15m 以深の上層のみを取次底層は一応除外した。

此の調整順位を各々に按いて全表次各層を通じて算術平均値したもののが Tab. 2 の下から一段目の数字で、此等の数値の小さいものから次で 1から15迄の順位を附けて次段の数字を得た。
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Tab. 3. Chlorinities.
この順位により15点を1～5・6～10及び11～15の三群に分けて夫々の占める区域をAt・Bt及びCtとしてFig.1を得た。斯くすると此の期間を通じて相対的な観点から夫々Atは比較的高温な、又Ctは比較的低温な区域であると云い得る。

2. 堤素量

塩素量に就いても水温と同様な取り扱い方をしてTab.3を得、15点を水温の場合と同様な三群に分けて夫々の占める区域をCc・Bc及びAcとしてFig.2を得た。斯くすると此の期間を通じて相対的な観点から夫々Ccは比較的高塩質、又Acは比較的低塩質の区域であったと云い得る。

Fig.1とFig.2とを比較して見ると夫々の三域の占める水域は厳密には範囲を略れないが、水温の伝播と塩分の拡散とではその機構が異っている事が想像される得るから、此の範囲は此れに基づくものと考える巨視的には一致していると考えて、範囲している区域内の点を両域に共通させて、水温と塩素量との相対的な分布から此の期間に於ける大伏沢の上層水塊区分をFig.3の如くA・B及びCの三区域に想定した。

II 結語

三区域の内Cは湾口部で淡水水路を通じて出入する外海水の影響を多分に受ける比較的低塩高塩であった区域、Aは湾奥部の比較的高塩低塩で他著者等が大伏沢固有水が涵養されるとしている区域、又Bは此等両者の混合する区域と考えた。唯Sts.8,9及10等の屬する東岸の細長い一帯は川棚川・根柱川及び郡川等大村
Fig. 3  Upper layer division of the Bay of Ōmura by the distribution of temperature and chlorinity.

本稿を草するに当って種々批判と助言を与えられた長崎海洋気象台長正井正男氏に対し、又調査に当って有益なる談話を提供された松原町漁業協同組合漁港内市作氏に対して深甚なる謝意を表する。

References :
1) 池田秀美：長崎海洋気象台報告，2，17～29，1949.
2) 宮本善一：日本海洋学会誌，61-1，23～32，1953.
3) 安井善之他：長崎海洋気象台外海況報告，1，16～33，1947.
4) 池田秀美：同上誌，4，23～32，1948.
5) 同上：同上誌，6，1～22，1949.
6) 安井善一：長崎海洋気象台外海況報告，11～2，4，73～82，1950.
7) 同上：長崎海洋気象台，6，7，1～72，1952.
8) 正井正男：長崎海洋気象台外海況報告，IV，4，54～61，1951.