Note on a Minke Whale Kept Alive in Aquarium

By

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Mito Aquarium, in the suburbs of Numazu city, Sizuoka prefecture, is famous in having a special pool to keep some large fish or dolphins in the utmost part of a small inlet. Striped porpoises (*Lagenorhynchus obliquidens* Gill) and bottle-nosed dolphins (*Tursiops truncatus truncatus* (Montague)) are now favourites in the pool.

Recently, a minke whale (*Balaenoptera acutorostrata* Lacépède) had been kept for about a month in this aquarium. As the keeping of baleen whale in an aquarium is very rare, we would like to report a short note on this whale with some records of observations made by us and submarine photographs taken by the Mainichi Press Co.

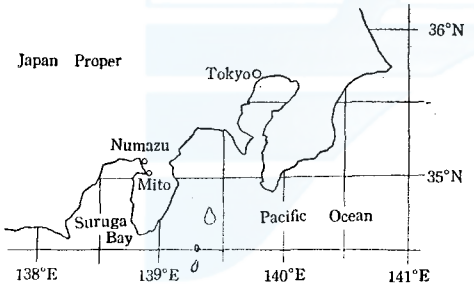


Fig. 1. Location of Mito Aquarium

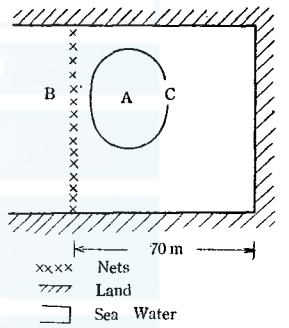


Fig. 2. Plan of the keeping pool.

The minke whale was caught by Osiki-ami (a kind of fixed net for fish) placed at 2 km. in front of the aquarium on November 26th 1955.

The whale was brought to the pool, hanged between two boats, after being wrapped up in nets, and towed by a motor boat. It took about an hour to take the whale to the aquarium and the whale is said as very gentle during the time of transportation. As shown in fig. 2, the pool is square in its shape (one side about 70 m. long), three sides are surrounded by land and the one, facing to the sea, is blocked with nets of synthetic fibres, through which the sea water circulates. A breakwater has been built in front of the pool in order to prevent the nets from any damage caused by waves. The deepest point of the pool is 12 m. deep, and the shallowest point is 4 m. at high tide, 1 m. at low tide.

Thus the minke whale was brought to the same pool, where two striped porpoises had already been kept. The minke whale was estimated to be about 20 feet long and its sex could not be determined. It had

been very gentle and swam generally anti-clockwise along the circle shown in fig. 2 until finally escaped from the pool after about a month. The whale seemed very healthy, showing no sign of wound or desease. Its dorsal fin inclined slightly to left side of the body.

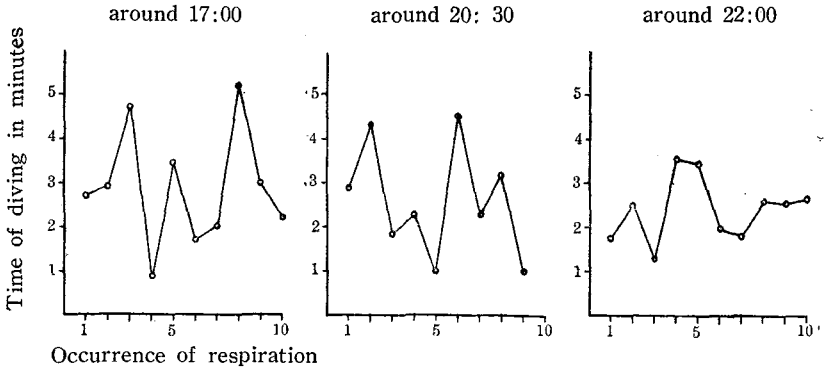
Mr. Hanajima, in charge of that aquarium, had tried in vain to feed the whale with flesh of anchovy every day, but it was often observed that many small mackerels kept in the pool gathered in the middle part of the pool and bounded up in the morning, suggesting that they had been attacked by the whale as in the case of other baleen whales. Some decreased number of mackerels observed might be attributable to whale's consumption.

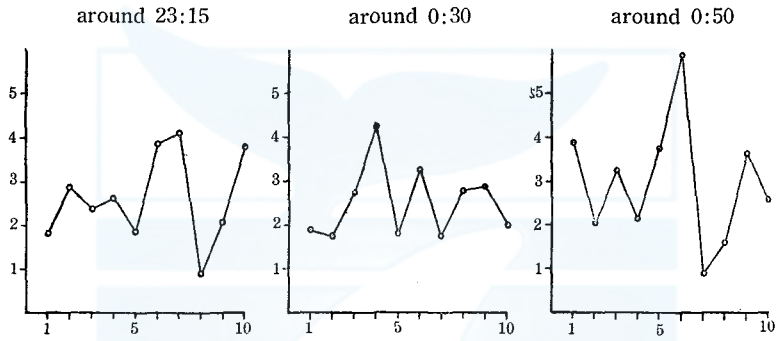
Some observations on respiration were made of this whale consecutively through a day in December 1955. The whale was swimming, usually following the same route of anti-clockwise in the deepest part of the pool (A in fig. 2), repeating respirations always at about the point C shown in fig. 2 after 2 or 3 run. Such regularity in the place of respiration may partly be attributed to the bottom condition of the pool. The whale had repeated somewhat rhythmical respirations, though no conspicuous periodicity had been observed. Intervals between respirations became shorter after a long dive, and vice versa.

The intervals between respirations decreased gradually as night comes, but increased again after midnight. The peak was observed at one o'clock (fig. 4). However, we can not draw any difinite conclusion from this fact whether this is really due to the whale's relaxation. We had never observed any other sign of the relaxation of porpoises in swimming, though they were seemed slightly inactive through the midnight. Our observation was endorsed by the members attending there and we are of the opinion that the whale had never breaked the swimming for sleeping throughout the period of the keeping, contrary to some other dolphins observed in Marine Studios, Marineland, Florida.

Towards the end of December three bottle-nosed dolphins were brought to the same pool. A few days after, to our regrets, the minke whale has escaped from the aquarium, breaking the nets at the position B shown in fig. 2 at a time before dawn on January 2nd of this year and no body noticed it until the morning. We wonder if the escape of the minke be attributable to the nuisance caused by the dolphins. It is informed, however, that no change had been observed in the behavior of the minke even after the arrival of the dolphins.

Thus, the minke whale was kept alive for 37 days in that aquarium. This is not the first experience for the aquarium, because they already had two similar cases before. The first minke whale was kept about 20 years ago for nearly three months, and in the latter half of that





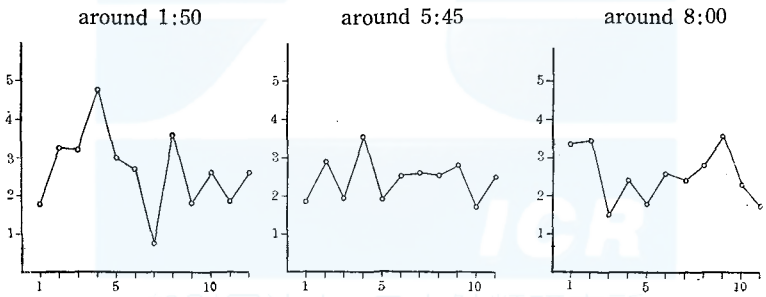


Fig. 3. Intervals between respirations.

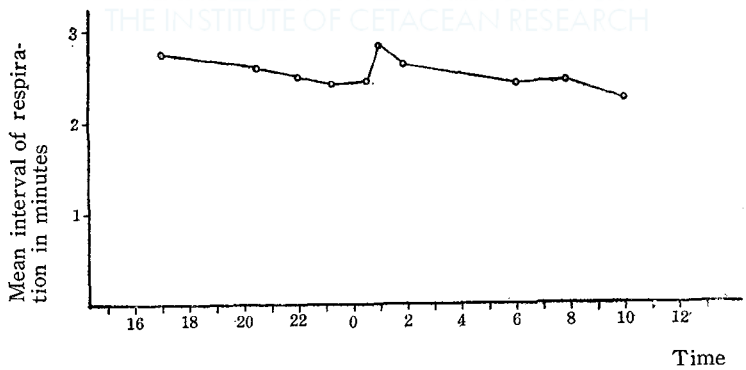
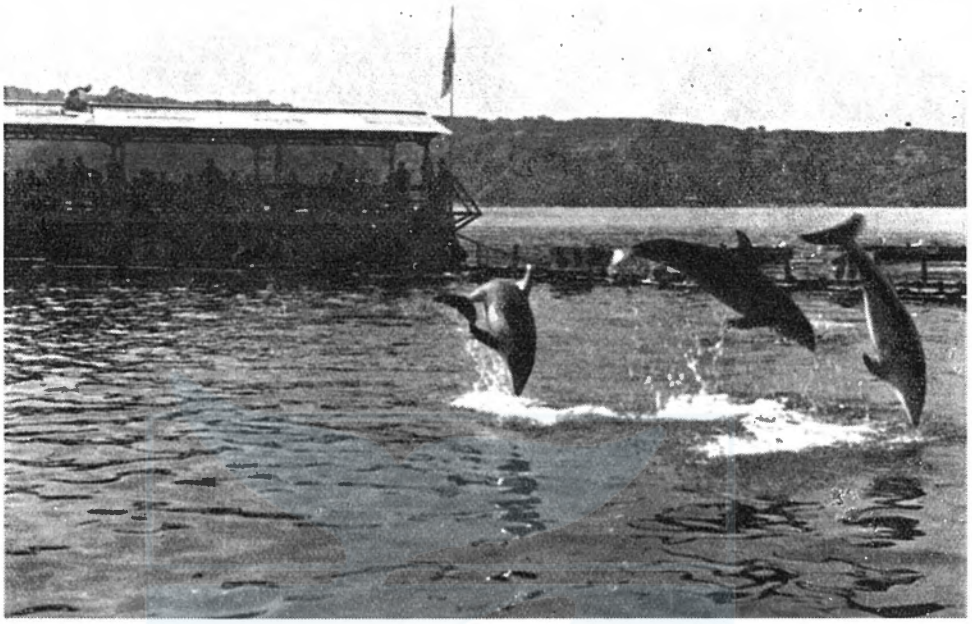


Fig. 4. Change of mean interval time between respiration according to the time of a day.

term it is said that the minke had fed on food. The second minke whale, a calf of several weeks old, had been kept in May 1954 until died after 2 weeks.

We wish to express our thanks to Mr. Jisaku Hanajima, the manager of Mito Aquarium, who accorded many facilities to us. We are also indebted to the Mainichi Press Company for the splendid submarine photographs shown in plates III–V.



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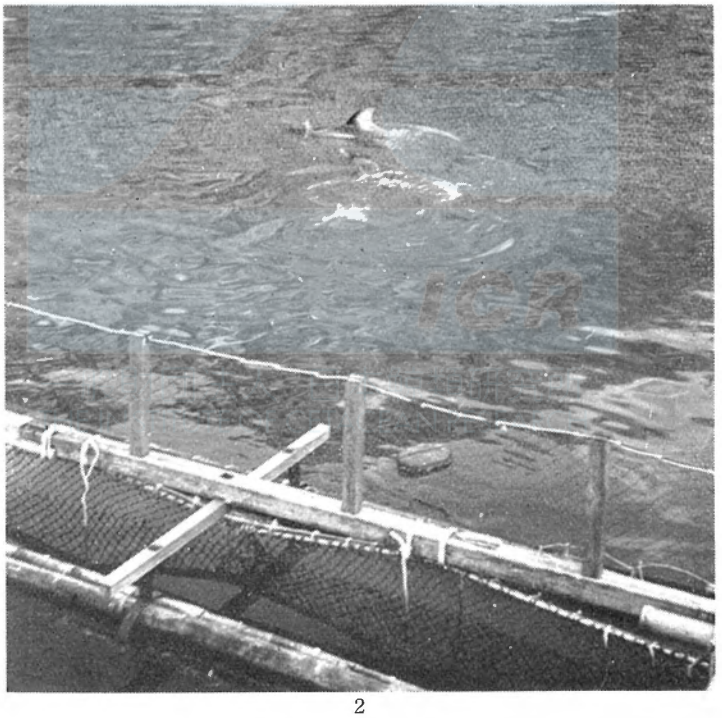

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Plate I. Keeping pool of the Mito Aquarium
1. Jumping of striped porpoises
2. Net (by the courtesy of Mr. T. Kawakami)

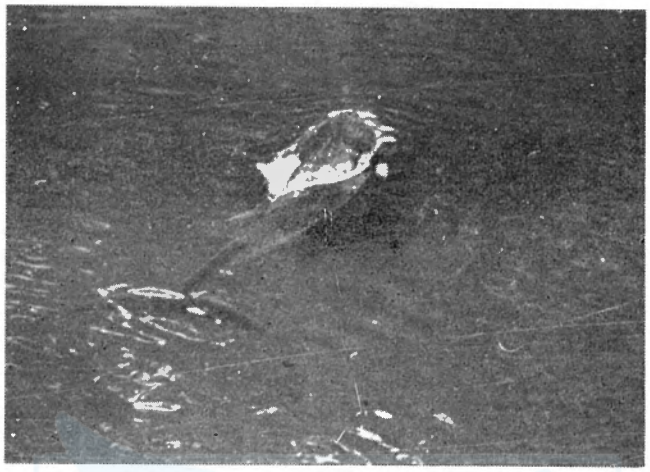

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Plate II. The minke whale in respirating.
(1: by the courtesy of Mr. T. Kawakami)

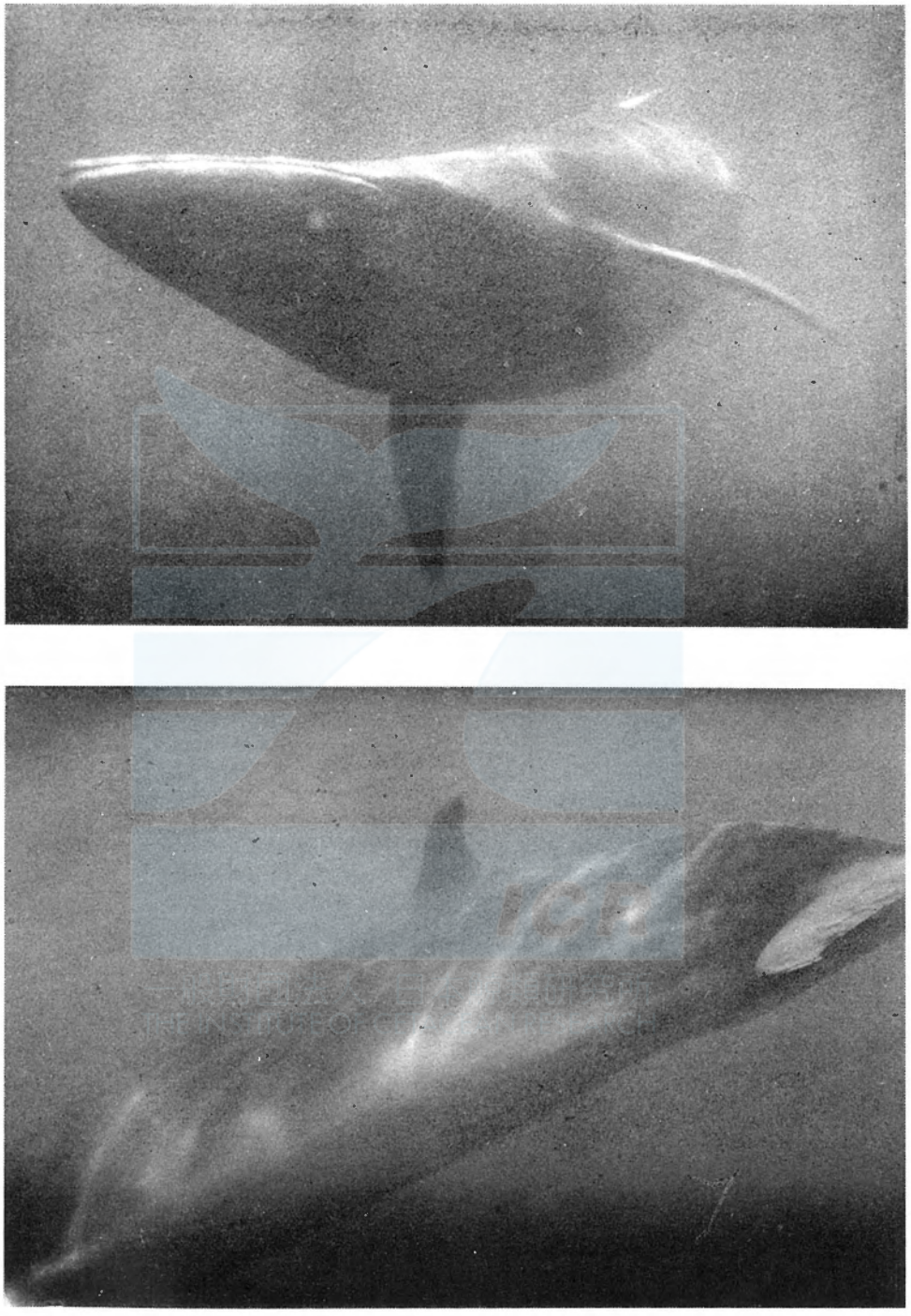

Plate III. Submarine photographs (1).
(by the courtesy of the Mainichi Press Co.)

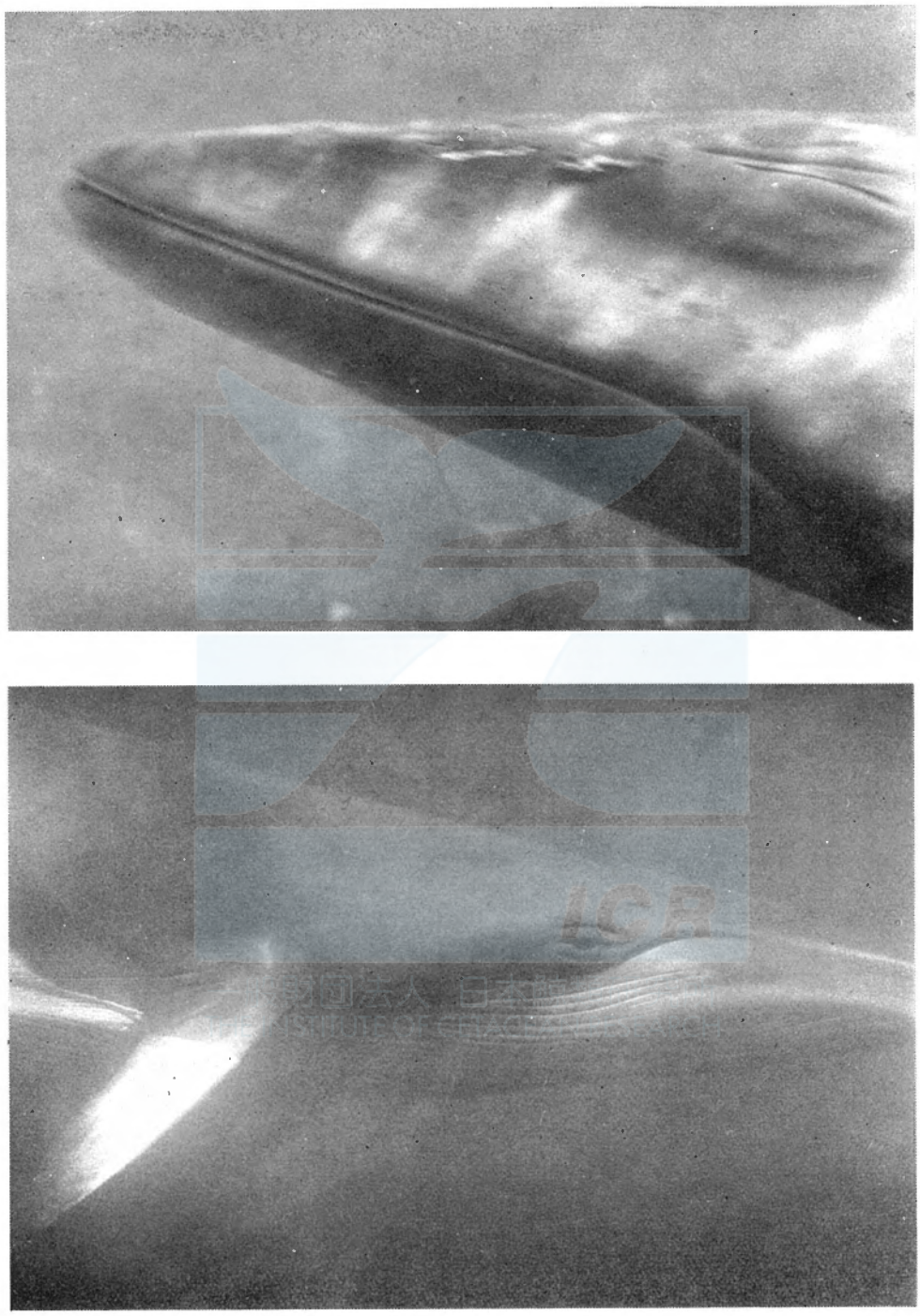

Plate IV. Submarine photographs (2).

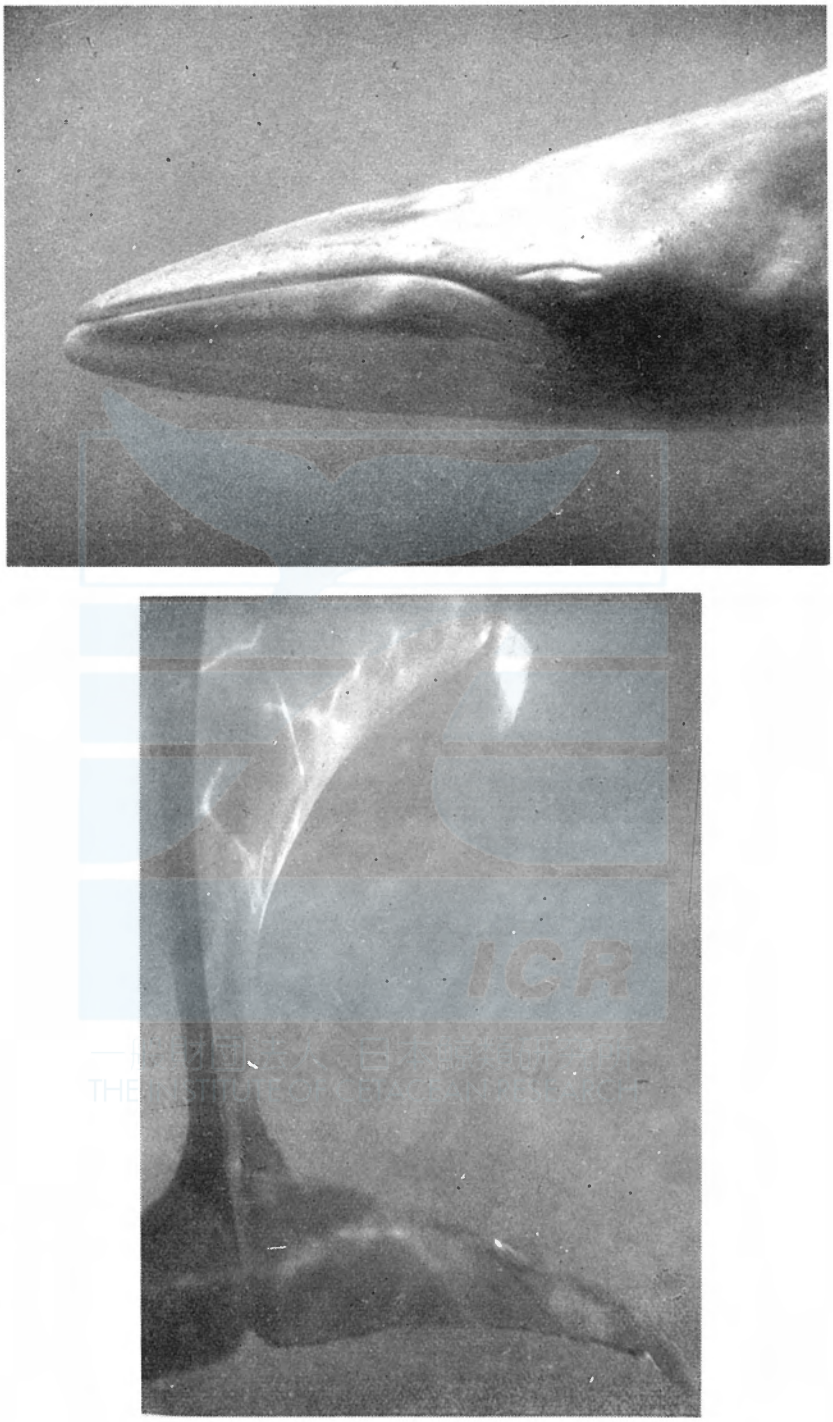

Plate V. Submarine photographs (3).