

## A RARE DOUBLE MONSTER OF DOLPHIN, *STENELLA CAERULEOALBA*

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Kawana, a village on the east coast of Izu Peninsula and located some 90 km south-west from Tokyo, is famous with dolphin hunting where several thousands of small cetaceans are caught every year by means of 'Oikomi-driving'. This whaling method is somewhat alike to that followed by Malaitan natives of Solomon Islands (Dawbin, 1966). Almost all the cetaceans caught there are used exclusively for local consumption in Kawana and its environs.

During the course of examining whale body of *S. caeruleoalba* in the field at Kawana village on November 26, 1970, one of the authors (Kashita) found very small but an abnormally shaped fetuses among many normal ones. On closer examination it was proved later to be a kind of double monster which was apparently attributable to monovulation. The fetuses have one head with two body trunks below the shoulder (Plate I).

A fairly big swarms of the dolphins had been driven into the Kawana Port on November 22, and kept alive there, and this fetuses were found among the one-day-catch of November 26. The number of dolphins caught on that day was 1,532 animals in total which were consisted of 1,262 larger sized individuals and 270 smaller ones. The composition of those animals by their state of maturity was not known. It could, however, be reasonably approximated from the previous study that both pregnant and lactating females occupy more than 40 percent among whole animals caught in mid-November of 1968 (Tobayama, 1970). The mother of this fetuses was 195 cm in total length, and showed no unusual appearance or characters both in the outside look and internal organs. The features of ovaries, the number of corpus albicans and corpus luteum were not observed. The estimated age of the mother would be about 3 years from the body length by applying it to growth curve obtained previously (Kasuya, 1970).

The general characters observed in this double monster were as follows: The body lengths along transverse axis are 16.8 and 17.2 mm respectively. The facial region in ventral view is much broader at the eye level than normal fetuses of about same length. The breadth is 5.6 mm in the former and 4.2 mm in the latter while the distance between eyes is 3.1 and 3.4 mm respectively. The eyes are clearly visible, and the external nasal pits, *Fovea nasalis*, are distinctly seen on a level slightly below the eyes. There is mouth cleft just below the nasal pits. External ear opening is obscure. Maxillary process, lower jaw are distinguishable. Distance between nasal pits and mouth cleft is considerable. A slight neck-flexure is visible, which seems as one of the distinct differences from that of normal fetuses. Two pairs of fore-limbs and rudimental processes of hind-limbs on the side of genital

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member are distinct. Tails are conical in shape with obscure constrictions of muscle plates. Umbilical cords are quite massive and distinct so as to fill the cavity formed by confronting two bodies along with the dark brown colored evaginations of internal organs such as heart and liver. Pigmentation in the skin is not developed yet.

Comparing these characters with those of normal foetuses collected on the same day at Kawana, and with another species of dolphins, *Lagenorhynchus acutus* or *Phocaena communis* (Guldberg and Nansen, 1894), there seems no distinct differences between them except lateral appearance; the double monster twins showed much slighter neck-flexure than the normal ones although it would be almost usual when the double monster was seen dorsi-laterally. It therefore seems that those unusual appearance is supposedly caused by the fusing due to twisting of the bodies at their shoulder.

There have been reported at least two instances of Siamese twins and one double monster in cetaceans: the first report is a double monster of 3 feet foetus of 72 feet fin whale which was caught and found in Leith Harbor, South Georgia in 1946 (Intern. Whal. Statis., 1949; Vangstein, 1971, *person.com.*), the second one is southern sei whale (Kawamura, 1969), and then humpback whale very recently (Zemsky and Budylenko, 1970). The instances of sei and humpback whales are complete Siamese twins so-called equal conjoined twins of thoracopagus, and those of fin whale seems to be a kind of hemididymus or double monster, viz., two headed twins with one body trunk. All the twins having been reported were the only cases of baleen whales. The double monster reported here would be the first record in toothed whales, and double monster of cephalopagus, the type of this foetuses which have two body trunks with one head, must be also the first instance throughout the order cetacea.

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#### EXPLANATION OF PLATE

The foetal double monster of *Stenella caeruleoalba*

- Fig. 1. Ventral view (ca.  $\times 3.1$ )
- Fig. 2. Dorsal view (ca.  $\times 3.1$ )
- Fig. 3. Ventro-lateral view (ca.  $\times 3.1$ )
- Fig. 4. Lateral views of the double monster (left) and the normal foetus of about same body length (right). (ca.  $\times 2.9$ )

