TWIN FOETUSES FROM A BLUE WHITE DOLPHIN

TERUO TOBAYAMA*, SENZO UCHIDA*
AND MASAHARU NISHIWAKI**

Twin foetuses of blue white dolphin were found in a school of about 2000 dolphins captured at Kawana, Ito city, Shizuoka Pref. on December 17, 1966. Though umbilical cords had been cut by a fisherman, we were fortunate enough to get the foetuses, the mother, the uterus and the placenta with two umbilical cords. We recognized the foetuses were undoubtedly twin and got a pleasure of investigating the rare phenomenon of twin dolphins. Twin or multiple foetuses of baleen whales have been reported comparatively frequently. But, so far as we know, no scientific report of twin dolphins have been obtained only some incidents of them have been heard from local people. We have discovered no twin foetuses in about 30000 dolphins investigated within recent three years.

The external measurement and the body proportion of the mother are shown in Table 1. There is no distinct difference in the body proportion of the mother from that of other common ones with single foetus. Color pattern of the body surface is also common to the others. As the external measurement and the body proportion of the foetuses are shown in Table 2, body length are 43.5 cm and 39.7 cm respectively. Since the umbilical cords were cut, we could not aware of which one had been connected to which cord. Compared them with a common single foetus of this species, both ones show some differences in the length of snout, dorsal fin at its base and the tail flukes from anterior insertion to the tip. A little difference is also recognized in the length from the tip of snout to the blowhole. But, it seems those differences were caused by the individual variation or by the measuring error, and judging this matter from the reports by Ohsumi (1960), Nakajima (1959), are not significant. There is least difference between the body proportion of the foetuses except in the length from the tip of snout to the blowhole. The individual of BL39.7 cm has longer snout than the other of BL 43.5 cm. And the shorter one has greater girth, naturally, the former looked more plump than the latter. Although we have not done anatomical examination, on the ovaries of the mother yet, one corpus luteum and one corpus albicans were found in the left ovary. We have done macroscopical observation already as reported here, anatomical and some other studies on the dolphins will be done in future.

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* Terushima Biological Station, Terushimaland.
** Ocean Research Institute, University of Tokyo.

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TABLE 1. MEASUREMENT OF BODY PROPORTIONS OF THE MOTHER OF THE TWIN FOETUSES COMPARED WITH THE NORMAL SPECIMENS IN *STENELLA CAERULEOALBA*

No.	Point of measurement	Mother of twins		Normal (14 females)		
		mm.	%	N	mean %	range %
1.	Body length	2210	100.0	14	2003	1770–2260
2.	Length of rostrum	130	5.9	14	5.5	4.2– 6.3
3.	Tip of rostrum to angle of gape	285	12.9	14	13.6	11.1–14.7
4.	Tip of rostrum to blow hole	345	15.6	14	16.2	13.7–18.2
5.	Tip of rostrum to center of eye	345	15.6	14	16.1	13.2–18.1
6.	Tip of rostrum to anterior margin of flipper	510	23.1	14	23.7	21.2–26.1
7.	Center of eye to ear hole	60	2.7	14	2.8	2.1– 4.1
8.	Notch of the flukes to posterior end of dorsal fin	925	41.9	14	40.5	34.6–43.8
9.	Notch of flukes to anus	655	29.8	14	30.3	28.2–32.7
10.	Notch of flukes to umbilicus	1245	56.4	14	54.9	50.9–60.0
11.	Anus to genital opening	80	3.6	14	2.9	1.7– 3.4
12.	Dorsal fin; base length	300	13.6	14	13.2	12.0–14.0
13.	Dorsal fin; height	190	8.6	14	7.5	6.2– 8.7
14.	Flukes; notch to tip	270	12.2	14	11.6	9.6–12.3
15.	Flukes; width at insertion	145	6.6	14	7.1	6.6– 7.6
16.	Flukes; anterior insertion to tip	327	14.8	14	14.5	12.6–15.6
17.	Flukes; tip to tip	480	21.7	14	22.4	18.6–24.8
18.	Flipper; anterior insertion to tip	296	13.4	14	14.4	13.4–15.5
19.	Flipper; axilla to tip	210	9.5	14	10.2	9.1–11.7
20.	Flipper; greatest width	100	4.5	14	4.8	4.0– 5.8
21.	Maximum height of body	550	24.8	14	23.2	21.2–26.6
22.	Girth at anterior insertion of dorsal fin	1130	51.0	14	50.2	45.1–53.8
23.	Number of teeth	38 39 39 38		14	43 43 43 44	39–49 38–49 39–46 40–46

TABLE 2. MESUREMENT OF BODY PROPORTIONS OF THE TWINS COMPARED WITH THE NORMAL SPECIMENS

No.	Point of measurement	Present twins A B. L. 435 mm B. W. 1000 g mm.	%	Present twins B B. L. 397 mm B. W. 950 g mm.	%	n.	Normal (2 M. 1 F.) mean %	range %
1.	Body length	435	100.0	397	100.0	3	408 mm	366–489 mm
2.	Length of rostrum	23	5.3	21	5.1	3	4.0	3.3– 4.5
3.	Tip of rostrum to angle of gape	68	16.2	65	16.4	3	15.0	14.8–16.6
4.	Tip of rostrum to blowhole	64	14.7	72	18.1	3	14.7	12.7–16.4
5.	Tip of rostrum to center of eye	81	18.6	78	19.4	3	17.6	17.0–18.3
6.	Tip of rostrum to anterior margin of flipper	123	28.3	109	27.4	3	26.7	24.8–28.2
7.	Center of eye to ear hole	15	3.4	16	4.0	3	3.4	2.7– 4.3
8.	Notch of flukes to posterior end of dorsal fin	165	38.0	149	37.4	3	39.4	35.8–39.6
9.	Notch of flukes to anus	125	28.3	113	28.4	3	30.2	29.2–31.6
10.	Notch of flukes to umbilicus	215	49.4	203	50.5	3	47.1	45.4–49.8
11.	Anus to genital opening	28	6.4	25	6.3	3	6.7	6.5– 6.8
12.	Dorsal fin; base length	55	12.7	56	14.1	3	10.2	9.2–10.8
13.	Dorsal fin; height	28	6.4	29	7.3	3	6.6	5.7– 7.8
14.	Flukes; notch to tip	50	11.3	41	10.3	3	12.4	10.4–15.4
15.	Flukes; width at insertion	37	8.5	33	8.3	3	9.1	8.5– 9.7
16.	Flukes; anterior insertion to tip	78	17.9	69	17.4	3	14.7	13.9–15.5
17.	Flukes; tip to tip	67	15.4	59	14.9	3	18.2	15.4–20.5
18.	Flipper; anterior insertion to tip	68	16.2	65	16.4	3	15.7	15.0–16.4
19.	Flipper; axilla to tip	46	10.6	42	10.6	3	11.3	10.1–12.5
20.	Flipper; greatest width	22	5.5	20	5.0	3	4.8	4.5– 5.4
21.	Maximum height of body	105	24.2	92	22.6	3	22.2	19.1–25.7
22.	Girth at anterior insertion of dorsal fin	230	53.0	232	58.0	3	53.0	47.5–61.1
23.	Number of hairs	L. 6 R. 5		L. 5 R. 5				

Umbilical cord.

	A	B		
Length;	190 mm	215 mm	Uterus weight;	1045 g
Diameter;	12 mm	11 mm	Placenta weight;	500 g

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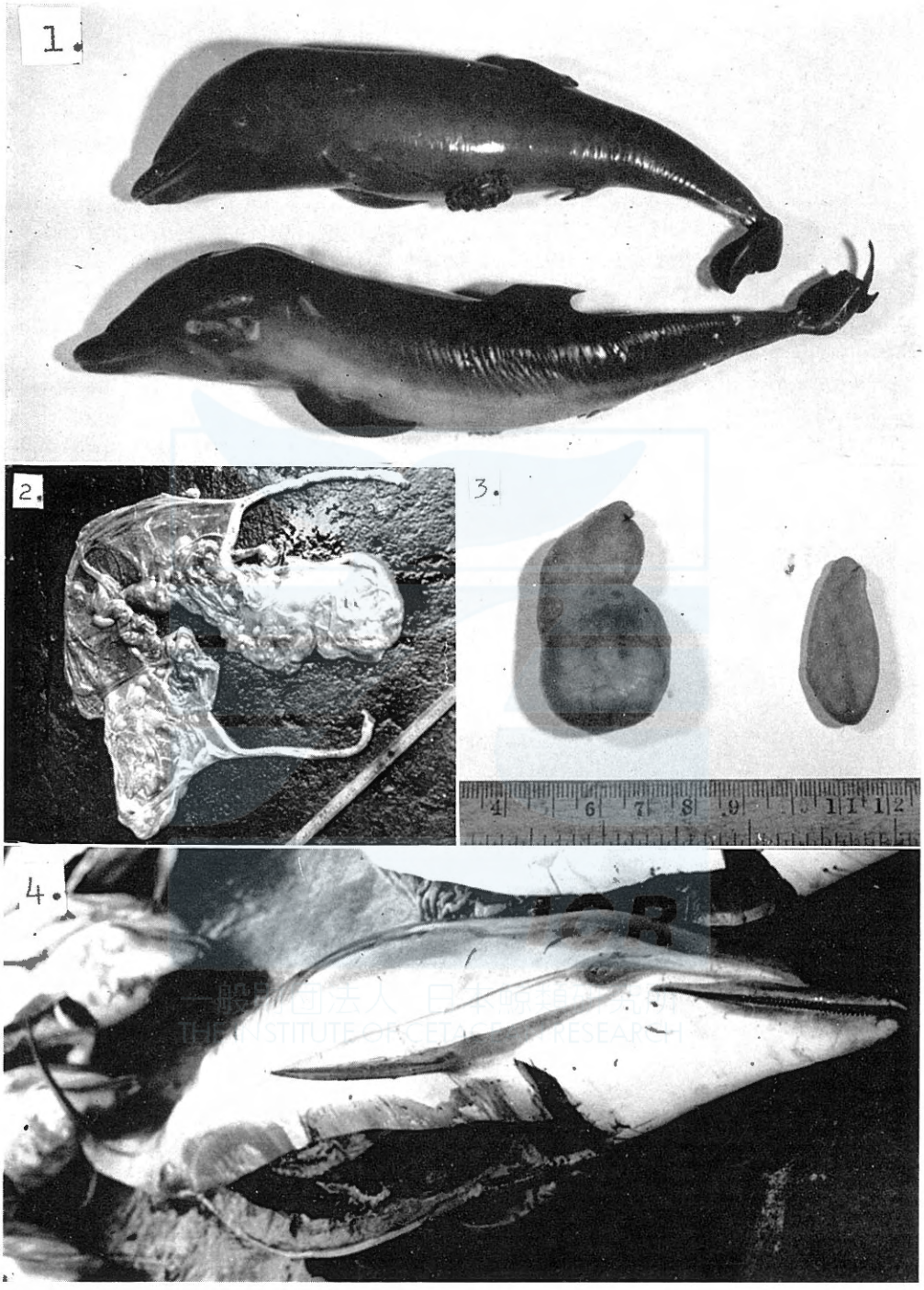
EXPLANATION OF PLATE

Fig. 1. Twin foetuses of a blue white dolphin.
Upper ; male, body length 39.7 cm.
Lower ; male, body length 43.5 cm.
Fig. 2. Placenta of the twin's mother with two umbilical cords.
Fig. 3. Ovaries of the twin's mother.
Fig. 4. Mother of the twins, ventral view from the head.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