

"Aquatic Mammals", Vol. 8 no. 1, June 1980.

HAEMATOLOGIC FINDINGS IN *SOTALIA FLUVIATILIS GUIANENSIS*
A.W. van Foreest, D.V.M., staff Veterinarian, Ouweland Zoo, Rhenen. the Netherlands.

Introduction

Not only is haematology one of the most useful tools for clinical evaluation of disease in cetaceans, but routine haematology and plasma chemistry determinations are part of a regular scheduled health programme in these animals (ENGELHARDT, 1979; MACNEILL, 1975; MEDWAY c.s., 1978; RIDGWAY c.s., 1970; RIDGWAY, 1972), and are also one of the most important measures for health monitoring for insurance purposes.

Several previous reports (ENGELHARDT, 1979; MACNEILL, 1975; RIDGWAY c.s., 1970) have dealt with haemograms and blood chemistry values of cetaceans, but no values have been reported for the species *Sotalia fluviatilis*.

This report presents findings from animals living in different dolphinariums in Europe. The data were obtained from different laboratories, so the samples have been subjected to variations due to time, condition and related changes within individual animals and to changes and laboratory personnel and equipment.

Materials and methods

All the data presented here come from 9 animals of the species *Sotalia fluviatilis guianensis*. These animals were caught off the Caribbean coast of Columbia, close to San Antero in the province of Cordoba. The capture, care and transport to Europe of these dolphins have been fully described (BOSENECKER, 1978).

The dolphins arrived in Europe at intervals during the period June to November 1977. The samples were taken from clinically normal animals maintained for at least four months in captivity.

Blood sampling was carried out on physically restrained non-anaesthetized animals and the samples were collected from lateral veins on the ventral or dorsal aspect of the tail flukes.

In total 30 samples were taken by different veterinarians and sent to 5 different laboratories. As in other reports, variations in collecting, handling and analytical technique must be taken into account when interpreting results.

From the Nürnberg Zoo, Germany, 8 samples were available from 5 animals, all taken on the same day (April 1978). Three split samples were analysed in two different laboratories, but did not show any marked variation.

In the Antwerp Zoo, Belgium, 14 samples were collected from three animals. The samples were taken in the period January 1978 - September 1979 and the analyses were carried out in one laboratory.

At Ouweland Zoo, Rhenen, Netherlands, 5 *Sotalia* have been kept, but three of them came from another location along the Caribbean coast. Of the two *Sotalia* from Colombia one died from an accident a few days after arrival at the Zoo, so 8 samples are available only from the other dolphins. The samples were taken between June 1979 and November 1979 and were analysed in two different laboratories (some data showed considerable differences).

TABLE
HAEMATOLOGY *SOTALIA FLUVIATILIS*

	NO STUDIED SAMPLES	No	PCV (VOL%)	RBC (NO.x10 ⁶ / μL)	Hb (G/DL)	MCV (FL)	MCH (PG)
ANTWERP ZOO	3	14	41.6 (40-44)	—	12.5 (11-13.5)	—	—
NURNBERG ZOO	5	8	41.0 (40-43)	4.36 (3.98-4.81)	13.9 (13.5-14.5)	—	—
OUWEHAND ZOO	1	8	39.0 (35-43)	4.19 (3.49-5.15)	13.8 (13.1-15.5)	—	—
MEAN (1.2.3.)	9	30	40.5 (38-43)	4.27 (3.74-4.98)	13.4 (12.9-14.5)	94 (86-101)	31 (29-34)
BOTTLE NOSED DOLPHIN	REFERENCES (MEDWAY)		41-49	3.5-4.0	14-16	113-124	—
<i>TURSIOPS TRUNCATUS</i>	AVERAGE VALUES AND RANGES (ENGELHARDT)		43 (40-47)	3.4 (3.1-3.8)	16 (14-17)	127 (117-142)	46 (42-51)

Results

The data are presented in tabular form in Tables I and II. The mean values and ranges are presented for each Zoo and here all values are averaged and compared with some published values from *Tursiops truncatus*.

Discussion

The data presented were accumulated over only a short period (January 1978-November 1979). It is apparent that the bloodsamples obtained from the 9 animals, of unknown age kept in different environments, sampled more than once under different circumstances and analysed in various laboratories, cannot be accepted as normal or base values. But this report provides preliminary information on blood and plasma values for *Sotalia fluviatilis* and may be useful for clinical evaluation of disease in this dolphin.

Acknowledgements

I thank the laboratory assistants of the Animal Health Service in Gelderland for their help in analyzing the blood samples. I gratefully acknowledge the Antwerp Zoo and the Nurnberg Zoo

TABLE I
GY SOTALIA FLUVIATILIS GUIANENSIS

MCV (FL)	MCH (PG)	MCHC (G/DL)	WBC (NU./ μ L)	NEUTR. (%)	BANDS (%)	LYMPH (%)	MONO (%)	EOS (%)	BAS (%)
—	—	—	7890 (4000-15.100)	48 (26-68)	1 (0-3)	32 (19-61)	3 (0-7)	16 (13-25)	0 (0-3)
—	—	—	9100 (7700-10.600)	—	—	—	—	—	—
—	—	—	10.500 (5500-16.600)	65 (54-93)	0 (0-1)	22 (6-33)	2 (2-3)	11 (1-19)	0
94 (-101)	31 (29-34)	33 (33.7-33.9)	9.163 (5700-14.100)	56.5 (40-80)	0,5 (0-2)	27 (13-47)	2,5 (1-5)	13,5 (7-22)	0 (0-2)
124	—	32-35	6000-12.000	55-65	1-5	15-25	< 1-5	6-27	—
27 (142)	46 (42-51)	36 (34-38)	10.600 (7.800-13.100)	59 (53-62)	—	34 (31-40)	4 (1-5)	2 (1-3)	1 (0-2)

for their kind cooperation sending me their results of bloodsamples. Moreover I thank Dr. A.G. Greenwood for his critical reading of the manuscript and his suggestions.

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TABLE II
 PLASMA CHEMISTRY *SOTALIA FLUVIATILIS GUIANENSIS*

	NO STUDIED SAMPLES	(SGPT (MU/ML))	(S/GOT (MU/ML))	LDH (MU/ML)	CPK (MU/ML)	UREA (MG/DL)	ALK. PHOS. (MU/ML)	TOTAL PROTEIN (G/L)	NA ⁺ (MEQ/L)	K ⁺ (MEQ/L)
1 NURNBERG ZOO	5	18 (11-26)	78 (66-97)	796 (693-874)	—	118 (102-148)	1131 (446-1568)	82 (74-96)	148 (143-160)	3.9 (3.6-4.3)
2 ANTWERP ZOO	3	32 (21-63)	106 (74-156)	675 (567-790)	71 (50-85)	113 (85-131)	837 (312-1620)	80 (74-97)	152 (150-155)	4.0 (3.4-4.4)
3 OUWEHAND ZOO	1	15 (8-40)	70 (41-105)	841 (713-917)	25 (19-31)	107 (98-212)	—	—	—	—
MEAN (1.2.3.)	9	16	85	771	48	113	984	81	150	3.9
BOTTLE NOSED DOLPHIN	(TABLES ENGELHARDT)	28 (24-29)	—	—	5 (4-6)	—	—	—	159 (154-163)	3.7 (3.1-3.4)
TURSIOPS TRUNCATUS	(TABLES MEDWAY)	7-19	33-190	—	23-190	—	33-403	70-80	150-161	4-5