

CONFIDENTIAL.

C.S.

1927
1924.

No.

C/20/27.

Secretary of State

SUBJECT.

1927

13 July.

Previous Paper.

Analysis of the Movements of Whales
by Mr. A. G. Bennett.

M. P. D/34/25.

MINUTES.

- 1-2. Despatch (Conf.) of 13 July 1927 from S of S.
- 3. Confidential despatch to S of S of 7 Sept. 1927.

Bring up re Mr. Bennett relation.
23/27. All.

of 23. 12. 27
to 23. 9. 27.

4.8 Brought up as draft. His

paper might now be referred to U

Bennett.

28

28. 1. 28.

Subsequent Paper.

Hon C.S

Please.

28/28. A.H.

119. fol. Let.

Records please

J. Bennett

30. 1. 28.

Hon. Col. Secy.

I have spoken with Dr Stanley Kemp on this subject while in London.

The papers submitted, were arranged at Dr S Kemp's suggestion, & they cover whaling from the Dependencies shown. Each Dependency separate. The actual areas of capture in each Dependency are very far from being worked out. I have no maps on which to do the work other than S Shetlands. Dr S Kemp has promised to supply others. Of those already plotted on a chart, Dr S Kemp has copies

The charts will take many months to prepare even when they arrive.

I should be pleased to receive the letter mentioned at the head of (11).

A. G. Bennett.

30. 1. 28.

Letter to Mr R. P. Bennett of 1st Feb 1928

4.

Ad. fol. Let.

Letter herewith for

you to withdraw.

Inside Minute Paper.

2. I take it that the reply
to the enquiry contained in
para 4 of the S. & S's despatch
is in effect that you will be
paid to do as requested if
you can be furnished with the
necessary data. ?

3. I presume that these charts
are not obtainable locally ?

J. S. S.

1. 2. 28.

30. Despatch to S. & S. no. 32 of 16th Feb 1949

Hon. Col. Secy:

Thank you for the letter.

The necessary charts cannot be procured here. Dr S. Kemp has promised to supply these. & it was his intention, when I discussed this matter with him in London, to draw up charts on a smaller scale & get them reproduced in large numbers. Such charts are vital to the Expedition, not only for whale-movements, but for almost every factor.

My first efforts were made on hektographed charts made by myself. These proved to be unsightly, due to smallness of paper and to the usual ink-spreading.

I actually expected these charts by R.S.S. Scoresby. They have not arrived.

Letter from the Ag. Govt. Naturalist dated 26. March 1928. 5-19.

Y.S.

Draft despatches herewith. I regret delay in submission.

W.H.G.
A.L.S.
11.11.28

Prof. Keschatch to S.F.S.F 3rd May. 1928

20.

Letter from Govt. Naturalist 24/1/29

21-27.

----- " ----- " -----

28-34

Earl

Col. Eyr.

With reference to para
3 of ret 35 at of "A"

or ret 34 please arrange to

have this material packed and

shipped to the Secretary of the

Highway Enquiry by the m.v.

"Loreto" due to leave Manila

about 26/27 - 28 - 29.

2. Hereafter please pass

to Hq. post bet. for info

V. Kelly
29

16.2.28

Hon Col: Secretary.

The case containing the charts
(32" x 9" x 9"), addressed to the
"Discovery" Expedition, 52 Queen Anne's Chambers,
Dean Yard Street, London W.1, is
being sent to the local agents, P. G. H. Co.,
today, for shipment per M.V. "Loreto"
by ship's parcel.

L. B. White
for Col: Eng^r
25/2/29.

ag. Col: Naturalist

to note:

C. J. H.
for Col: Nat
20/2/29

Hon Col Secy

notes, Thank you,

ag Nat
25/2/29

P. A.
26/2/29

Hon. C. S.

DUPLICATE For necessary acknowledgment
to S. of S.
(2) letter to Mr. Bennett.
29/8/27. A.H.

2

FALKLAND ISLANDS.

Downing Street,

Confidential.

13 July, 1927.

Sir,

Red 10 m
D/3 H/25:

I have the honour to acknowledge the receipt of Lieutenant Colonel Beattie's despatch No. 51 of the 18th March last forwarding a copy of a paper by Mr. A. S. Bennett entitled 'Analysis of the Movements of Whales, as reported by gunners, in the Dependencies of the Falkland Islands'.

2. The enclosure intended for Sir Sidney Harner has been duly forwarded to him, and, at the same time the paper has been communicated to the 'Discovery' Committee who received it with great interest. They have recorded that Mr. Bennett's work will be of great value to the investigations on which the Expedition is engaged and they have asked that an expression of their appreciation may be conveyed to Mr. Bennett.

3. The collection of these data has been referred to by Mr. Vesp in his latest scientific report to the Committee and it is understood that the question of inviting Mr. Bennett to analyse his results on lines which have been indicated to him and to submit a paper for publication in the Discovery reports is under consideration. It is understood, further, that Mr. Bennett has other statistics on the positions in which whales were caught, which may prove of interest.

4. In the meantime, the Committee would be

glad

OR

A. V. HOBSON, Esq., C.M.G.

etc.

etc. etc.

1

glad to avail themselves of the valuable material collected to compute the results of the figures by somewhat more rigid treatment than that which circumstances have allowed Mr. Bennett to adopt with the view, not only of checking Mr. Bennett's results, but of securing as accurately as possible a comparison of movements at the same season in different years.

If Mr. Bennett sees no objection to that course, they would be greatly obliged if you would invite him to define approximately for the Committee's information the areas from which the figures were obtained and to state whether the records were obtained from the same areas in each year, since it is very desirable to obtain as close an indication as possible of the ground from which the records have been and are being obtained.

5. In conclusion the Committee have expressed the view, in which I concur, that care should be exercised in any continuation of the work that the whaling gunners should gather no hint of the results (direction of movements) expected.

I have the honour to be,

Sir,

Your most obedient,

humble servant,

(Signed) L. S. AMERY

(3)
GOVERNMENT HOUSE,
STANLEY,

7th September, 1927.

FALKLAND ISLANDS.

CONFIDENTIAL.

Sir,

I have the honour to acknowledge the receipt of your Confidential despatch of the 13th of July, 1927, and to say that I have noted with much pleasure the expressions of appreciation therein contained of the work done by Mr. A. G. Bennett in connection with the analysis of whale movements in the Dependencies of this Colony.

2. As you are aware Mr. Bennett is at present on leave in the United Kingdom but on his return I shall not fail to comply with your instructions and to communicate with Mr. Bennett in the sense desired.

I have the honour to be,

Sir,

Your most obedient,

humble servant,

ARNOLD HODSON.

THE RIGHT HONOURABLE

L. C. M. S. AMERY, P.C., M.P.,

SECRETARY OF STATE FOR THE COLONIES.

C/20/27.

1st February, 28.

Sir,

I am directed by the Governor to inform you that the "Discovery" Committee have expressed the desire through the Secretary of State for the Colonies that you should be notified that the Committee have received with great interest the copy of the paper by you entitled "Analysis of the Movements of Whales, as reported by gunners in the Dependencies of the Falkland Islands", and have recorded that your work will be of great value to the investigations on which the Expedition is engaged and have asked that an expression of their appreciation may be conveyed to you.

2. I am to add that His Excellency is glad to cause an intimation in such terms to be communicated to you.

I am,

Sir,

Your obedient servant,

12.
Colonial Secretary.

MR. A. G. BENNETT,
ACTING GOVERNMENT NATURALIST,
STANLEY.

(14)

Naturalist Dept.

Stanley.

26. 3. 1928

Sir.

I beg to submit a further item to
the movement of whales.

This part of the work is now up to date.

The drawings are tracings of the original
in this office. I have not prepared more than
one copy as further copies if required by
the "Discovery Committee" could be cheaply
& quickly made by the blue-print method.
from this one.

I am

Sir

Your obedient servant

A. G. Bennett.

as Gov. Nat.

To the Honourable
the Colonial Secretary

Stanley.

Whale movements in the Dependencies of the Falkland Islands
Seasons 1922/3 to 1926/7.

Being a continuation of "analysis of the movements of
whales as reported by gunners." 15.XII.1926.in C/S.C.29/27.

At the suggestion of Dr, S.Kemp SDC. of RRS."Discovery."
I have prepared an absolute movement of the two principal
species, monthly.

It appeared desirable that the actual figures should be
shown. A tabulated statement of the actual whales reported in
movement together with the balance movement in numbers of
whales, is attached. These balance figures reduced to a
percentage I have placed as radiating star graphs. (one tracing
copy attached).

Uniform with the previous paper submitted, showing the
entire movement for each place, and month in terms of
percentages of the whole, are attached copies of the movement
for 1926/7. These do not differ materially from previous years
but appear to confirm the general movement.

I have separated, as far as possible the pelagic operations
from S Shetlands, and the S Orkneys for 1926/7. A good deal of
overlapping took place. This division appears justified by
results, indicating the probable area of divergence of the
two main movements.

Fin-Whales.

The Season at S Shetlands starts with a strong Westerly
movement, developing to SW. through January, and February, and in
March, and April becoming NW, and North.

The Weddell Sea (pelagic) for 1926/7 only, indicate a NW
to Westerly movement.

The S Orkney movement is plainly related to that of
S Georgia.

S Georgia is on the whole strongly Easterly. In 1923/4
this turned Westerly in March, but has not done so since.

There are many instances showing the wonderfully close similarity of balance movement in the same month of different years, quite apart from the great difference in numbers of whales present. On the other hand there are differences, some of which might be explained by divergent movements overlapping.

There is a rough tendency to follow the general coast contour, and also one directly off land.

Blue-whale.

The Season at S Shetlands starts with a SW direction becoming stronger in December, and January. February starts the Northerly run.

The Weddell Sea for 1926/7 only, shows affinities with S Orkneys, and S Georgia in being generally Eastward.

S Georgia starts with a Easterly South Easterly direction, becoming strongly NE as the season progresses.

as in the Fin-whale movement, there is a strong tendency to follow the coast contours, as well as a suspicion of overlapping of direction.

A. J. Bennett

Government Naturalist.

24. March. 1928.

117	131	145	159	173	187	201	215	229	243
122	136	150	164	178	192	206	220	234	248
127	141	155	169	183	197	211	225	239	253
132	146	160	174	188	202	216	230	244	258
137	151	165	179	193	207	221	235	249	263
142	156	170	184	198	212	226	240	254	268
147	161	175	189	203	217	231	245	259	273
152	166	180	194	208	222	236	250	264	278
157	171	185	199	213	227	241	255	269	283
162	176	190	204	218	232	246	260	274	288
167	181	195	209	223	237	251	265	279	293
172	186	200	214	228	242	256	270	284	298
177	191	205	219	233	247	261	275	289	303
182	196	210	224	238	252	266	280	294	308
187	201	215	229	243	257	271	285	299	313
192	206	220	234	248	262	276	290	304	318
197	211	225	239	253	267	281	295	309	323
202	216	230	244	258	272	286	300	314	328
207	221	235	249	263	277	291	305	319	333
212	226	240	254	268	282	296	310	324	338
217	231	245	259	273	287	301	315	329	343
222	236	250	264	278	292	306	320	334	348
227	241	255	269	283	297	311	325	339	353
232	246	260	274	288	302	316	330	344	358
237	251	265	279	293	307	321	335	349	363
242	256	270	284	298	312	326	340	354	368
247	261	275	289	303	317	331	345	359	373
252	266	280	294	308	322	336	350	364	378
257	271	285	299	313	327	341	355	369	383
262	276	290	304	318	332	346	360	374	388
267	281	295	309	323	337	351	365	379	393
272	286	300	314	328	342	356	370	384	398
277	291	305	319	333	347	361	375	389	403
282	296	310	324	338	352	366	380	394	408
287	301	315	329	343	357	371	385	399	413
292	306	320	334	348	362	376	390	404	418
297	311	325	339	353	367	381	395	409	423
302	316	330	344	358	372	386	400	414	428
307	321	335	349	363	377	391	405	419	433
312	326	340	354	368	382	396	410	424	438
317	331	345	359	373	387	401	415	429	443
322	336	350	364	378	392	406	420	434	448
327	341	355	369	383	397	411	425	439	453
332	346	360	374	388	402	416	430	444	458
337	351	365	379	393	407	421	435	449	463
342	356	370	384	398	412	426	440	454	468
347	361	375	389	403	417	431	445	459	473
352	366	380	394	408	422	436	450	464	478
357	371	385	399	413	427	441	455	469	483
362	376	390	404	418	432	446	460	474	488
367	381	395	409	423	437	451	465	479	493
372	386	400	414	428	442	456	470	484	498
377	391	405	419	433	447	461	475	489	503
382	396	410	424	438	452	466	480	494	508
387	401	415	429	443	457	471	485	499	513
392	406	420	434	448	462	476	490	504	518
397	411	425	439	453	467	481	495	509	523
402	416	430	444	458	472	486	500	514	528
407	421	435	449	463	477	491	505	519	533
412	426	440	454	468	482	496	510	524	538
417	431	445	459	473	487	501	515	529	543
422	436	450	464	478	492	506	520	534	548
427	441	455	469	483	497	511	525	539	553
432	446	460	474	488	502	516	530	544	558
437	451	465	479	493	507	521	535	549	563
442	456	470	484	498	512	526	540	554	568
447	461	475	489	503	517	531	545	559	573
452	466	480	494	508	522	536	550	564	578
457	471	485	499	513	527	541	555	569	583
462	476	490	504	518	532	546	560	574	588
467	481	495	509	523	537	551	565	579	593
472	486	500	514	528	542	556	570	584	598
477	491	505	519	533	547	561	575	589	603
482	496	510	524	538	552	566	580	594	608
487	501	515	529	543	557	571	585	599	613
492	506	520	534	548	562	576	590	604	618
497	511	525	539	553	567	581	595	609	623
502	516	530	544	558	572	586	600	614	628
507	521	535	549	563	577	591	605	619	633
512	526	540	554	568	582	596	610	624	638
517	531	545	559	573	587	601	615	629	643
522	536	550	564	578	592	606	620	634	648
527	541	555	569	583	597	611	625	639	653
532	546	560	574	588	602	616	630	644	658
537	551	565	579	593	607	621	635	649	663
542	556	570	584	598	612	626	640	654	668
547	561	575	589	603	617	631	645	659	673
552	566	580	594	608	622	636	650	664	678
557	571	585	599	613	627	641	655	669	683
562	576	590	604	618	632	646	660	674	688
567	581	595	609	623	637	651	665	679	693
572	586	600	614	628	642	656	670	684	698
577	591	605	619	633	647	661	675	689	703
582	596	610	624	638	652	666	680	694	708
587	601	615	629	643	657	671	685	699	713
592	606	620	634	648	662	676	690	704	718
597	611	625	639	653	667	681	695	709	723
602	616	630	644	658	672	686	700	714	728
607	621	635	649	663	677	691	705	719	733
612	626	640	654	668	682	696	710	724	738
617	631	645	659	673	687	701	715	729	743
622	636	650	664	678	692	706	720	734	748
627	641	655	669	683	697	711	725	739	753
632	646	660	674	688	702	716	730	744	758
637	651	665	679	693	707	721	735	749	763
642	656	670	684	698	712	726	740	754	768
647	661	675	689	703	717	731	745	759	773
652	666	680	694	708	722	736	750	764	778
657	671	685	699	713	727	741	755	769	783
662	676	690	704	718	732	746	760	774	788
667	681	695	709	723	737	751	765	779	793
672	686	700	714	728	742	756	770	784	798
677	691	705	719	733	747	761	775	789	803
682	696	710	724	738	752	766	780	794	808
687	701	715	729	743	757	771	785	799	813
692	706	720	734	748	762	776	790	804	818
697	711	725	739	753	767	781	795	809	823
702	716	730	744	758	772	786	800	814	828
707	721	735	749	763	777	791	805	819	833
712	726	740	754	768	782	796	810	824	838
717	731	745	759	773	787	801	815	829	843
722	736	750	764	778	792	806	820	834	848
727	741	755	769	783	797	811	825	839	853
732	746	760	774	788	802	816	830	844	858
737	751	765	779	793	807	821	835	849	863
742	756	770	784	798	812	826	840	854	868
747	761	775	789	803	817	831	845	859	873
752	766	780	794	808	822	836	850	864	878
757	771	785	799	813	827	841	855	869	883
762	776	790	804	818	832	846	860	874	888
767	781	795	809	823	837	851	865	879	903
772	786	800	814	828	842	856	870	884	908
777	791	805	819	833	847	861	875	889	913
782	796	810	824	838	852	866	880	894	918
787	801	815	829	843	857	871	885	899	923
792	806	820	834	848	862	876	890	904	928
797	811	825	839	853	867	881	895	909	933
802	816	830	844	858	872	886	900	914	938
807	821	835	849	863					

Moving Whales reported at South Shetlands, 1922/3.

Blue.

	Nov		Dec.		Jan.		Feb.		Mar.		Apr.	
		b		b		b		b		b		b
N.	10	3	14	-	37	-	14	-	17	-	7	-
NW.	6	2	26	14	26	-	49	40	26	26	6	3
W.	5	1	38	26	21	-	14	13	25	17	7	7
SW.	20	-	139	80	178	134	33	-	33	7	29	9
S.	7	-	24	10	80	43	26	12	20	3	46	39
SE.	4	-	12	-	44	18	9	-	-	-	3	-
E.	4	-	12	-	31	10	1	-	8	-	-	-
NE.	43	23	59	-	44	-	43	10	26	-	20	-

Fins.

N.			5	-	68	31	145	52	70	-	21	-
NW.			18	-	87	69	105	-	122	38	32	32
W.			12	22	46	1	131	109	19	-	23	13
SW.			48	16	161	64	298	135	178	-	70	-
S.			12	7	37	-	93	-	150	89	74	53
SE.			24	6	18	-	131	26	84	-	-	-
E.			-	-	45	-	22	-	25	6	10	-
NE.			32	-	97	-	163	-	380	202	104	34

South Shetlands 1923/4

Blue.

N.	21	-	28	-	52	9	32	21	10	10	5	5
NW.	16	-	89	-	64	20	19	13	4	4	4	2
W.	14	4	51	-	36	24	9	5	5	-	1	1
SW.	60	42	131	65	128	82	16	4	2	-	3	3
S.	38	17	133	105	43	-	11	-	-	-	-	-
SE.	21	5	102	13	44	-	6	-	-	-	2	-
E.	10	-	113	62	12	-	4	-	6	7	-	-
NE.	18	-	66	-	46	-	14	-	7	5	-	-

Fins.

N.			21	-	119	-	278	19	123	60	91	83
NW.			83	18	248	107	390	227	264	196	147	142
W.			84	34	200	130	475	447	87	79	36	26
SW.			61	8	583	431	791	312	125	-	38	-
S.			70	49	280	161	259	-	63	-	8	-
SE.			65	-	141	-	163	-	68	-	5	-
E.			50	-	70	-	28	-	8	-	10	-
NE.			56	-	152	-	479	-	194	69	82	44

b. Is the balance in whales after subtracting the opposite direction

b. Is the balance of whales after subtracting the opposite direction.

Moving Whales reported at South Shetlands 1924/5.

Blue.

	Nov.	b.	Dec.	b.	Jan.	b.	Feb.	b.	Mar.	b.	Apr.	b.
N.	11	-	21	-	28	-	64	12	15	7	32	23
NW.	50	15	57	36	46	-	57	26	12	-	16	-
W.	99	83	61	18	45	-	50	28	24	17	7	-
SW.	148	123	183	156	221	155	90	-	64	7	46	-
S.	24	13	36	15	87	59	52	-	8	-	9	-
SE.	35	-	21	-	64	18	31	-	18	-	27	11
E.	16	-	43	-	52	7	22	-	7	-	8	1
NE.	25	-	27	-	66	-122	32	57	-	-	86	40

Fins.

N.	18	10	31	-	171	-	40	-	110	2	117	-
NW.	18	15	138	84	437	104	174	93	429	375	124	12
W.	40	36	156	125	184	-	159	112	213	134	114	63
SW.	20	15	356	290	908	498	436	304	393	85	210	-
S.	8	-	52	21	181	10	71	31	108	-	155	38
SE.	3	-	54	-	333	-	81	-	54	-	112	-
E.	4	-	31	-	216	32	47	-	79	-	51	-
NE.	5	-	66	-	410	-	132	-	308	-	463	253

at South Shetlands 1925/6

Blue.

	Oct.	b.	Nov.	b.	Dec.	b.	Jan.	b.	Feb.	b.	Mar.	b.	Apr.	b.
N.	-	-	16	-	41	-	17	-	6	-	5	-	88	19
NW.	-	-	29	-	59	-	45	-	8	-	17	-	25	-
W.	-	-	54	10	154	118	52	21	11	4	7	3	41	-
SW.	3	2	80	49	316	223	174	87	21	-	22	-	74	-
S.	-	-	34	18	146	105	96	79	7	1	17	12	39	-
SE.	-	-	42	13	99	40	58	13	10	2	15	-	43	18
E.	-	-	44	-	36	-	31	-	7	-	4	-	57	16
NE.	1	-	31	-	93	-	87	-	22	1	31	9	308	234

	May.	b.
N.	1	1
NW.	-	-
W.	-	-
SW.	1	-
S.	-	-
SE.	2	2
E.	-	-
NE.	6	5

Fins.

N.	3	-	109	10	131	-	195	104	201	127	58	27
NW.	-	-	176	-	376	165	265	153	559	447	73	58
W.	16	15	179	42	393	99	187	90	332	192	60	50
SW.	10	10	311	28	1085	230	318	143	358	23	82	-
S.	11	8	99	-	411	280	91	-	74	-	31	-
SE.	1	1	179	3	211	-	112	-	112	-	25	-
E.	1	-	37	-	294	-	97	-	140	-	10	-
NE.	-	-	283	-	855	-	175	-	335	-	117	35

b. Is the balance of whales after subtracting the opposite direction.

Moving Whales reported at South Shetlands 1926/7.

		Blue.										
		Nov.	b. Dec.	b. Jan.	b. Feb.	b. Mar.	b. Apr.	b.				
N.	10	-	11	-	6	-	2	-	21	-	3	-
NW.	14	-	22	5	8	-	6	4	25	14	1	-
W.	17	2	39	31	10	10	6	-	17	14	4	1
SW.	31	8	44	27	10	-	11	2	44	20	2	-
S.	14	4	20	9	6	-	8	6	22	1	7	4
SE.	19	5	17	-	10	2	2	-	11	-	4	3
E.	15	-	8	-	-	-	10	4	3	-	3	-
NE.	23	-	17	-	12	2	9	-	24	-	12	10

		Fins.										
N.	-	-	60	3	66	-	99	-	171	76	167	-
NW.	-	-	159	128	107	23	301	144	360	74	213	33
W.	20	13	175	136	183	166	229	120	254	108	150	4
SW.	11	11	190	63	232	-	190	-	624	230	404	-
S.	2	2	63	-	74	8	128	29	95	-	207	40
SE.	6	6	31	-	84	-	157	-	286	-	180	-
E.	7	-	39	-	17	-	109	-	146	-	146	-
NE.	-	-	127	-	249	17	328	138	394	-	462	58

Pelagic. Weddell Sea 1926/7.

		Blue.					
		Oct.	b. Nov.	b. Dec.	b. Jan.	b.	
N.	2	-	22	-	5	1	-
NW.	4	-	12	-	5	1	1
W.	9	-	26	-	3	-	-
SW.	8	-	36	-	3	-	-
S.	3	1	43	21	4	-	-
SE.	18	14	83	71	4	-	-
E.	17	8	63	37	5	2	-
NE.	19	11	57	21	7	4	-

		Fins.					
N.		6	-	5	4	2	-
NW.		21	14	53	21	11	11
W.		5	1	21	-	15	11
SW.		27	-	18	-	-	-
S.		8	2	1	-	2	-
SE.		7	-	22	-	-	-
E.		4	-	26	5	4	-
NE.		28	1	31	13	12	12

b. Is the balance of whales after subtracting the opposite direction.

Moving Whales reported at South Orkneys 1925/6.

Blue.

	Nov.	b.Dec.	b.Jan.	b.Feb.	b.Mar.	b.Apr.	b.
N.		2	2	-	-	3	1
NW.		2	2	-	1	12	12
W.		-	-	-	1	-	-
SW.		-	-	-	-	-	-
S.		-	1	1	-	-	-
SE.		-	2	2	3	-	4
E.		5	3	3	2	1	4
NE.		1	1	4	-	8	-

			Fins								
N.		0	4	45	37	16	-	18	4	13	13
NW.		3	-	59	47	17	-	9	-	-	-
W.		7	2	9	-	23	-	1	-	-	-
SW.		2	-	19	-	138	-	123	-	3	-
S.		5	-	8	-	32	16	14	-	-	-
SE.		6	3	12	-	94	77	70	61	-	-
E.		5	-	90	90	195	172	172	171	3	3
NE.		7	5	176	157	153	15	237	114	7	4

South Orkneys 1926/7.

				Blue.					
N.	24	24	16	9	8	-	13	-	8
NW.	22	13	29	26	10	3	8	-	1
W.	3	-	4	-	11	-	8	-	2
SW.	1	-	9	-	24	-	8	-	5
S.	-	-	7	-	32	24	15	2	9
SE.	9	-	3	-	7	-	16	8	4
E.	8	5	24	20	44	33	31	23	6
NE.	9	8	12	3	32	8	22	14	1

				Fins.					
N.		12	-	108	-	223	156	132	96
NW.		42	28	125	-	217	196	146	105
W.		19	-	99	-	17	-	223	38
SW.		62	28	123	-	147	-	36	-
S.		18	6	134	26	67	-	36	-
SE.		14	-	68	57	23	-	39	-
E.		47	28	170	71	234	217	185	-
NE.		34	-	143	20	303	156	141	105

b. Is the balance of whales after subtracting the opposite direction.

b. Is the balance of whales after subtracting the opposite direction.

Moving Whales reported at South Georgia 1923/4.

	Oct.	b.	Nov.	b.	Blue. Dec.	b.	Jan.	b.	Feb.	b.	Mar.	b.
N.	6	2	16	5	80	55	38	4	27	-	12	10
NW.	6	-	20	-	41	-	14	-	8	-	8	3
W.	3	-	8	-	32	-	14	-	18	7	11	6
SW.	5	-	5	-	20	-	27	-	31	4	7	-
S.	4	-	11	-	25	-	34	-	36	9	2	-
SE.	24	18	20	-	41	-	73	59	12	4	5	-
E.	13	10	17	9	130	98	23	9	11	-	5	-
NE.	17	14	27	22	38	18	44	17	27	-	7	-

	Apr.	b.	May.	b.
N.	2	-	-	-
NW.	8	3	1	1
W.	57	36	8	8
SW.	5	4	-	-
S.	6	4	-	-
SE.	5	-	-	-
E.	1	-	-	-
NE.	1	-	-	-

Fins.

	Oct.	b.	Nov.	b.	Dec.	b.	Jan.	b.	Feb.	b.	Mar.	b.
N.	48	40	21	-	60	45	45	-	13	-	34	-
NW.	11	6	32	3	33	-	31	-	54	-	30	-
W.	26	-	25	-	33	-	-	-	5	-	101	92
SW.	6	-	9	-	10	-	56	26	118	69	83	-
S.	8	-	23	2	15	-	64	19	35	22	45	9
SE.	5	-	29	-	50	17	212	181	76	22	30	-
E.	29	3	62	37	47	14	27	27	122	117	9	-
NE.	14	8	45	36	57	47	30	-	49	-	84	1

	Apr.	b.	May.	b.
N.	34	15	2	1
NW.	37	28	27	27
W.	86	71	9	9
SW.	23	16	6	6
S.	19	-	1	-
SE.	9	-	-	-
E.	15	-	-	-
NE.	7	-	-	-

South Georgia 1924/5.

	Sep.	b.	Oct.	b.	Blue. Nov.	b.	Dec.	b.	Jan.	b.	Feb.	b.
N.	21	11	79	57	66	48	50	48	28	16	-	-
N.	-	-	21	11	79	57	66	48	50	48	26	16
NW.	6	-	42	-	110	-	139	-	88	-	83	-
W.	4	-	5	-	27	-	26	-	15	-	21	-
SW.	4	4	7	-	33	-	27	-	26	-	9	-
S.	-	-	10	-	22	-	18	-	2	-	10	-
SE.	10	4	131	89	207	97	304	165	147	59	114	31
E.	5	1	52	47	121	94	198	172	103	88	86	65
NE.	-	-	51	44	113	80	84	57	84	58	33	24
	Mar.	b.	Apr.	b.	May.	b.						
N.	57	53	41	36	17	15						
NW.	66	-	69	-	45	3						
W.	36	-	47	19	15	2						
SW.	6	-	12	-	11	-						
S.	4	-	5	-	2	-						
SE.	104	38	71	2	42	-						
E.	83	47	28	-	13	-						
NE.	102	96	48	36	26	15						

b. Is the balance of whales after subtracting the opposite direction.

Moving Whales reported at South Georgia 1924/5 cont:

	Sept.	b. Oct.	Fins.		b. Dec.	b. Jan.	b. Feb.	b.			
			b. Nov.	b. Nov.							
N.	-	85	85	330	316	39	17	115	70	113	60
NW.	25	23	142	25	175	47	82	-	302	176	110
W.	4	-	20	-	77	-	9	-	11	-	84
SW.	2	-	35	-	3	-	21	-	63	-	25
S.	-	-	-	-	14	-	22	-	45	-	53
SE.	2	-	117	-	128	-	148	66	126	-	159
E.	6	2	130	110	253	176	137	128	245	234	186
NE.	15	13	87	52	158	155	51	30	198	135	135

	Mar.	b. Apr.	b. May.	b.
N.	102	72	62	52
NW.	90	-	45	-
W.	39	-	30	-
SW.	-	-	4	-
S.	30	-	10	-
SE.	139	49	156	111
E.	44	5	77	47
NE.	61	61	65	61

at South Georgia 1925/6

Blue .

	Sep.	b. Oct.	b. Nov.	b. Dec.	b. Jan.	b. Feb.	b.
N.	5	-	16	4	8	1	5
NW.	-	-	13	-	4	-	2
W.	7	5	16	-	7	-	28
SW.	5	3	18	5	3	-	-
S.	9	4	12	-	7	-	2
SE.	4	4	13	-	13	9	8
E.	2	-	29	13	29	22	31
NE.	2	-	13	-	3	-	12

	Mar.	b. Apr.	b. May.	b.
N.	26	21	13	9
NW.	33	-	19	-
W.	156	-	21	-
SW.	11	-	9	-
S.	5	-	4	-
SE.	62	29	30	11
E.	160	4	78	57
NE.	86	75	33	24

Fins.

	Sep.	b. Oct.	b. Nov.	b. Dec.	b. Jan.	b. Feb.	b.
N.	-	-	54	47	43	37	78
NW.	3	3	20	-	35	-	184
W.	-	-	40	-	36	-	123
SW.	-	-	3	-	17	-	30
S.	-	-	7	-	6	-	18
SE.	-	-	27	7	41	6	162
E.	-	-	85	45	89	53	342
NE.	-	-	31	28	58	41	474

	Mar.	b. Apr.	b. May.	b.
N.	158	147	117	72
NW.	314	46	263	32
W.	271	46	256	-
SW.	77	-	88	-
S.	11	-	45	-
SE.	268	-	231	-
E.	317	-	591	335
NE.	228	151	307	219

b. Is the balance of whales after subtracting the opposite direction.

Moving Whales reported at South Georgia 1926/7.

Blue.

	Oct.	b. Nov.	b. Dec.	b. Jan.	b. Feb.	b. Mar.	b.
N.	21	- 29	- 66	- 69	- 28	- 65	25
NW.	25	- 48	- 133	- 97	- 60	- 73	25
W.	17	- 64	- 169	- 344	141 133	- 2 56	-
SW.	10	- 49	- 123	- 206	150 139	65 34	-
S.	32	11 108	79 108	42 129	60 107	79 40	-
SE.	89	64 164	116 314	181 279	182 162	102 48	-
E.	176	159 209	145 274	105 203	- 131	- 72	16
NE.	43	33 74	25 193	170 56	- 74	- 44	10

	Apr.	b. May.	b.
N.	5	- 2	2
NW.	8	- -	-
W.	6	5 -	-
SW.	4	- -	-
S.	8	3 1	1
SE.	11	3 -	-
E.	1	- -	-
NE.	4	- -	-

Fins.

	Oct.	b. Nov.	b. Dec.	b. Jan.	b. Feb.	b. Mar.	b.
N.	12	9 85	47 25	5 79	- 16	- 118	29
NW.	16	- 96	- 19	2 47	- 39	- 110	-
W.	18	- 44	- 37	- 99	- 92	- 81	-
SW.	2	- 11	- 22	- 74	- 102	24 107	44
S.	33	- 38	- 20	- 104	25 41	25 80	-
SE.	32	16 96	- 17	- 272	225 129	90 185	75
E.	48	30 103	59 96	59 143	44 124	22 113	32
NE.	10	8 54	43 157	135 139	65 78	- 63	-

	Apr.	b. May.	b.
N.	57	25 -	-
NW.	53	- 4	4
W.	29	- -	-
SW.	66	30 -	-
S.	32	- -	-
SE.	95	42 -	-
E.	54	25 -	-
NE.	28	- -	-

b. Is the balance of whales after subtracting the opposite direction.

Whale movements at South Georgia, Season 1926-7.

(1) 9

	Blue-whale.									
	Oct.		Nov.		Dec.		Jan.		Feb.	
	Nos.		Nos.	Nos.	Nos.	Nos.	Nos.	Nos.	Nos.	
N.	21	5.1	29	3.9	66	4.8	69	4.9	28	3.4
NW.	25	6.	48	6.4	133	9.6	97	7.	60	7.2
W.	17.	4.1	64	8.5	169	12.2	344	24.8	133	15.9
SW.	10	2.4	49	6.5	123	8.9	206	14.9	139	16.7
S.	32	7.7	108	14.5	108	7.8	129	9.3	107	12.8
SE.	69	21.5	164	22.	314	22.7	279	20.1	162	19.4
E.	176	42.6	209	28.	274	19.8	263	14.7	131	15.7
NE.	43	10.4	74	9.9	193	14.	56	4.	74	8.9
	413	99.8	745	99.7	1380	99.8	1383	99.7	843	100.0

No direction

115	21.7	337	31.1	454	24.7	546	28.3	296	26.2
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	Mar.		Apr.		May.	
N.	65	15.	5	10.5	2	66.6
NW.	73	16.9	8	17.	-	-
W.	56	12.9	6.	12.8	-	-
SW.	34	7.9	4	8.5	-	-
S.	40	9.2	8	17.	-	-
SE.	48	11.1	11	23.6	1	33.3
E.	72	16.7	1	2.1	-	-
NE.	44	10.2	4	8.5	-	-
	432	99.9	47	100.0	3	99.9

No direction

202	31.9	29	38.1	1	25.0
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Sei-whales

	Feb.		Mar.		Apr.	
N.	--	--	23	7.4	26	12.3
NW.	11	28.9	67	21.5	23	10.9
W.	8	21.	14	4.5	11	5.2
SW	3	7.9	28	9.	-	-
S.	7	18.4	32	10.3	1	.4
SE.	2	5.3	48	15.4	61	28.9
E.	2	5.3	48	15.4	49	23.2
NE.	5	13.1	51	16.4	40	18.9
	38	99.9	311	99.9	211	99.8

No direction

32	45.7	195	38.5	114	35.0
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8

Whale-movements at South Georgia, Season 1926-7.

Fin-whales.

	Oct.	Nov.	Dec.	Jan.	Feb.
N.	12	8.6	85	16.1	25
NW.	16	11.3	96	18.2	19
W.	18	12.8	44	8.3	37
SW.	2	1.4	11	2.	22
S.	3	2.2	38	7.2	20
SE.	32	22.7	96	18.2	17
E.	48	34.	103	19.5	96
NE.	10	7.	54	10.2	157

141 100.0 527 99.7 393 99.9 957 99.9 621 99.7

No direction :- 37 20.8 157 22.9 127 24.2 126 11.6 224 20.5

Fin-whales.

	Mar.	Apr.	May
N.	118	13.6	57
NW.	110	12.7	53
W.	81	9.3	29
SW.	107	12.3	66
S.	89	10.3	32
SE.	185	21.	95
E.	113	13.	54
NE.	63	7.3	28

866 99.5 414 99.8 4 100.0

No direction :- 159 15.5 56 11.9 0 17.4 189 11.3 171 16.4

	Movement	Non-movement	Total
Blue	5237	1980	7217
Fin	3923	886	4809
Sei	567	341	908
Sperm			15
Back			1
			12950

(7)

Whale movements at South Orkneys. Season 1926-7.
Blue-whales.

	Nov.		Dec.		Jan.		Feb.		Mar.	
	Nos.	✓	Nos.	✓	Nos.	✓	Nos.	✓	Nos.	✓
N.	24	31.6	16	15.3	8	4.8	13	10.7	8	22.2
NW.	22	28.9	29	27.8	10	5.9	8	6.6	1	2.8
W.	3	3.9	4	3.8	11	6.5	8	6.6	2	5.5
SW.	1	1.3	9	8.6	24	14.3	8	6.6	5	13.9
S.	-	-	7	6.7	32	19.	15	12.4	9	25.0
SE.	9	11.8	3	2.9	7	4.2	16	13.2	4	11.1
E.	8	10.5	24	23.1	44	26.2	31	25.6	6	16.7
NE.	9	11.8	12	11.5	32	19.	22	18.2	1	2.8

No direction	76	99.8	104	99.7	168	99.9	121	99.9	36	100.0
---	85	52.8	79	43.2	84	33.3	75	38.6	20	35.7

Fin-whales.

N.	12	4.8	108	11.1	223	18.1	132	14.1
NW.	42	16.9	125	12.9	217	17.6	146	15.6
W.	19	7.6	99	10.2	17	1.4	223	23.7
SW.	62	25.	123	12.7	147	11.9	36	3.8
S.	18	7.2	134	13.8	67	5.4	36	3.8
SE.	14	5.6	68	7.	23	1.8	39	4.2
E.	47	18.9	170	17.5	234	19.	185	19.7
NE.	34	13.7	143	14.7	303	24.6	141	15.0

No direction	248	99.7	970	99.9	1231	99.8	938	99.9
	92	27.	204	17.4	158	11.4	171	15.4

	In movement	non-movement	Total
Blue	505	343	848
Fins	3387	625	4012
Hump-backs	640	250	12
Sperms	7702	1514	2
Whales			4874

Whale movements at South Shetlands, Season 1926-7.

Operations from land. Blue-whales

	Nov.		Dec.		Jan.		Feb.		Mar.		April.	
	Nos.	✓	Nos.	✓	Nos.	✓	Nos.	✓	Nos.	✓	Nos.	✓
N.	10	7.	11	6.2	6	9.7	2	3.7	21	12.5	3	8.3
NW	14	9.8	22	12.4	8	12.9	6	11.1	25	14.9	1	2.8
W.	17	11.8	39	21.99	10	16.1	6	11.1	17	10.2	4	11.1
SW.	31	21.7	44	24.7	10	16.1	11	20.3	44	26.3	2	5.5
S.	14	9.8	20	11.2	6	9.7	8	14.8	22	13.2	7	19.4
SE.	19	13.2	17	9.5	10	16.1	2	3.7	11	6.6	4	11.1
E.	15	10.5	8	4.5	-	-	10	18.5	3	1.8	3	8.3
NE	23	16.	17	9.5	12	19.3	9	16.6	24	14.3	12	33.3

143 99.8 178 99.9 62 100.0 54 99.8 167 99.8 36 99.8

No direction :- 40 21.8 41 18.7 14 18.4 21 28. 111 39.9 28 35.6

Fin-whales.

N.	-	-	60	7.1	66	6.5	99	6.4	171	7.3	167	8.7
NW	-	-	159	18.8	107	10.5	301	19.5	360	15.4	213	11.
W.	20	43.3	175	20.7	183	18.	229	14.8	254	10.9	150	7.8
SW.	11	23.9	190	22.5	232	22.9	190	12.3	624	26.7	404	20.9
S.	2	4.3	63	7.5	74	7.3	128	8.3	95	4.	207	10.7
SE.	6	13.	31	3.7	84	8.3	157	10.2	286	12.3	180	9.3
E.	7	15.2	39	4.6	17	1.6	109	7.	146	6.3	146	7.6
NE.	-	-	127	15.	249	24.6	328	21.3	394	16.9	462	23.9

46 99.8 844 99.9 1012 99.7 1541 99.8 2330 99.8 1929 99.9

No direction :- 10 17.8 146 14.7 243 19.3 280 15.3 276 10.6 659 25.4

	Moving	Non-movement	Total
Blue	640	255	895
Fins	7702	1614	9316
H-back			118
Sperm			16
Sei			2
P-nose			31

10378

Whale movements at South Shetlands, (Pelagic ice operations).

Season 1926-7.

Note. The area covered by these operations is not defined. This whaling was carried out by licensed vessels from S. Shetlands operating in the Weddell Sea.

Blue-whale.

	Oct.		Nov.		Dec.		Jan.	
	Nos.	✓	Nos.	✓	Nos.	✓	Nos.	✓
N.	2	2.5	22	6.4	5	13.9		
NW.	4	5.	12	3.5	5	13.9	1	
W.	9	11.1	26	7.6	3	8.3		
SW.	8	10.	36	10.5	3	8.3		
S.	3	3.7	43	12.6	4	11.1		
SE.	18	22.5	83	24.3	4	11.1		
E.	17	21.2	63	18.4	5	13.9		
NE.	19	23.7	57	16.6	7	19.4		
<hr/>								
	80	99.7	342	99.9	36	99.9	1	
No direction	:-	33	29.2	100	22.6	5	12.2	

Fin-whale.

N.	6	5.6	5	2.8	2	4.3
NW.	21	19.8	53	29.9	11	23.9
W.	5	4.7	21	11.8	15	32.6
SW.	27	25.4	18	10.2	-	-
S.	8	7.5	1	.5	2	4.3
SE.	7	6.6	22	12.4	-	-
E.	4	3.7	26	14.6	4	8.6
NE.	28	26.4	31	17.5	12	26.1
<hr/>						
	106	99.7	177	99.7	46	99.8
No direction.	30	22.	19	9.7	0	0.0

	Moving	Non-movement	Total.
Blue	459	138	597
Fin	329	49	378
HPack			5
Sperm			4
<hr/>			984.

GOVERNMENT HOUSE,

STANLEY.

3rd May, 1928.

FALKLAND ISLANDS.

CONFIDENTIAL.

Sir,

In continuation of my Confidential despatch of the 7th of September, 1927, and to previous correspondence relative to the analysis of whale movements in the Dependencies, I have the honour to forward a copy of a letter addressed to the Colonial Secretary by Mr. A. G. Bennett submitting a further memorandum by him on the subject. The tracing of the graphs of the percentage of the movements referred to in the memorandum is also attached.

Enclosure I.

Enclosure II.

2. It will be observed that in order to give effect to the request of the 'Discovery' Committee for information which would enable a comparison of movements at the same season in different years to be made, Mr. Bennett has appended to his paper an abstract of the actual data supplied by the gunners of the whale catchers.

3. I would add that care will be exercised in accordance with the view expressed in the final paragraph of your Confidential despatch of the 13th of July, 1927, not to permit the gunners to gather any hint of the results of this work.

I have the honour to be,

Sir,

Your most obedient,

humble servant,

THE RIGHT HONOURABLE

L. C. M. S. AMERY, F.C., M.P.,

SECRETARY OF STATE FOR THE COLONIES.

ARNOLD HODSON

13

Naturalist Dept

Stanley.

24 th January 1929.

Sir.

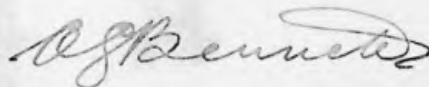
I beg to attach three copies of whale movement figures being a continuation to date of similar data dated 24 March 1928.

I would ask that one copy be forwarded to Dr, S. Kemp. D. Sc.

I am,

Sir.

Your obedient servant.



Ag:Gov:Naturalist.



To the Honourable
the Colonial Secretary.

Stanley.

16

Whale-movements at South Shetlands, 1927/8. Blue-whale.

as far as possible the palaeo operations have been shown separately. b. - the balance after the opposite direction has been subtracted.

	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.
	b.	b.	b.	b.	b.	b.
N.	22	25	-	4	6	-
NW.	23	20	31	7	10	7
W.	14	29	15	35	15	6
SW.	31	68	61	9	38	42
S.	8	36	11	5	25	21
SE.	17	44	6	-	2	-
E.	16	23	1	1	6	4
NE.	50	42	1	2	16	5
	181	307	118	45	144	50
	17	43	26	76	17	22
	198	350	144	121	161	72

Fin-whale .

N.	11	1	23	11	100	63	231	152	130	33
NW.	24	28	121	105	300	350	332	41	252	130
W.	21	17	72	49	222	105	184	60	157	77
SW.	31	18	149	104	126	-	278	-	400	64
S.	10	-	12	-	17	-	70	-	97	-
SE.	-	-	16	-	19	-	191	-	122	-
E.	4	-	23	-	27	-	124	-	80	-
NE.	13	-	45	-	190	64	335	57	345	-
	118		491		1070		1754		1592	
	-		23		116		306		344	
	118		468		1186		2060		1936	

Moving	Blue	845	Fin	4996
Not moving	Blue	201	Fin	789
	Blue	1046		5784
	Fin	1		1
	HLR	1		1
	Sci	1		1
		1048		5786

20

Whale movements Palagic (between S Georgia & S Shetlands 1927/8
 b. - the balance after the opposite direction has been subtracted.

	Oct.		Nov.		Dec.		Jan.		Feb.		Mar.	
	b.		b.		b.		b.		b.		b.	
N.	4	-	30	-	8	-	-	-	-	-	-	-
NW.	11	-	22	-	22	-	5	-	-	-	-	-
W.	24	3	55	6	25	-	-	-	5	5	-	-
SW.	53	30	148	92	77	39	2	-	-	-	-	-
S.	25	21	80	36	51	43	12	12	-	-	-	-
SE.	14	23	120	98	46	24	7	2	-	-	-	-
E.	21	-	49	-	40	21	15	15	-	-	-	-
NE.	23	-	80	-	30	-	8	2	-	-	-	-
<hr/>												
R.	100		546		313		49		5			
	96		353		405		96		4			
	291		899		718		145		9			

	Oct.		Nov.		Dec.		Jan.		Feb.		Mar.	
	b.		b.		b.		b.		b.		b.	
N.	-	-	14	9	20	-	21	21	29	24	-	-
NW.	0	2	5	-	31	26	26	12	73	60	-	-
W.	2	2	15	-	17	-	39	-	41	-	-	-
SW.	10	-	47	12	39	21	-	-	41	-	-	-
S.	-	-	5	-	24	4	-	-	5	-	-	-
SE.	0	-	10	5	25	-	24	-	13	-	-	-
E.	-	-	15	-	55	36	132	93	91	50	-	-
NE.	12	2	35	-	18	-	77	77	92	51	-	-
<hr/>												
R.	30		146		243		322		305			
	29		78		179		45		190			
	59		224		419		374		595			

Moving	Blue	1100	Fin.	1107
Not moving	Blue	954	Fin.	512
	Blue	2054		1650
	Fin	1059		
	Sperra	20		
		3742		

84

Whale-movements at South Orkneys. 1927/8.

As far as possible the pelagic operations have been shown separately. b. the balance after the opposite direction has been subtracted. R. the number of whales not moving.

		Blue-whales.											
		Nov.		Dec		Jan.		Feb.		Mar.		Apr.	
		b.		b.		b.		b.		b.		b.	
N.		1		11	11	3		-		-		-	
NW.		3		-		6		7		2		-	
W.		-		-		4		7	7	-		-	
SW.		21	15	17	17	8	4	18	16	10	10	-	
S.		16	15	-		5	2	-		-		-	
SE.		62	57	35	35	53	47	12	5	15	13	2	
E.		6	6	-		12	3	-		-		-	
NE.		6		-		4		2		-		-	
R.		115		63		95		46		27		2	
R.		71		96		75		123		17		1	
R.		156		159		170		69		44		3	

		Fin-whales.											
		Oct.		Nov.		Dec.		Jan.		Feb.		Mar.	
		b.		b.		b.		b.		b.		b.	
N.		5	5	5	5	-		19	11	66		-	
NW.		-		-		7		195	113	179	145	10	1
W.		4	4	3		-		99	84	297	199	7	7
SW.		-		10		17	7	71		430	306	4	4
S.		-		17	12	-		8		71	5	-	
SE.		-		14	14	24	17	82		154		9	
E.		-		3		-		15		98		-	
NE.		3	3	13	3	10		129	58	174		-	
R.		12		65		58		618		1499		30	
R.		9		21		43		175		154		27	
R.		21		86		101		743		1653		57	

		April.					
		b.					
N.		-					
NW.		-					
W.		11	11				
SW.		7	7	Moving,	Blue.	Fin.	
S.		-		Not moving	348	1304	
SE.		4	4	Blue	133	1381	
E.		-		Fin	631	1585	
NE.		-			2685		
R.		22			3516		
R.		2					
R.		24					

19 78

Whale-movements at South Georgia 1977/8.

b.- The balance after the opposite direction has been subtracted. R.- The number of whales not moving.

Blue-whale.

	Sept.	Oct.	Nov.	Dec.	Jan.
	b.	b.	b.	b.	b.
N.	-	44	113	69	7
NW.	-	30	79	40	32
W.	3	22	32	50	36
SW.	1	18	11	11	80
S.	-	26	28	34	41
SE.	1	136	213	226	186
E.	-	123	212	119	69
NE.	-	74	96	89	78
R.	5	473	794	638	325
		165	576	465	184
		638	1370	1103	509

	Feb.	Mar.	April.
	b.	b.	
N.	2	5	2
NW.	6	1	1
W.	4	3	1
SW.	16	1	1
S.	10	3	
SE.	24	-	
E.	7	2	
NE.	2	-	
R.	71	15	3
	31	7	2
	102	22	5

Fin-whales.

	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.
		b.	b.	b.	b.	b.
N.		79	181	185	26	30
NW.		147	249	150	104	81
W.		8	65	51	156	75
SW.		3	30	11	87	121
S.		1	4	26	98	61
SE.		32	104	195	283	152
E.		48	136	71	114	86
NE.		55	177	147	88	49
R.	8	373	946	1272	956	605
	-	95	183	294	183	162
	8	468	1131	1566	1139	767

	Mar.	April.	Blue	Fin
	b.		Moving	Moving
N.	6		2324	4464
NW.	56	18	1430	1962
W.	65	56	3754	
SW.	69	69	6476	
S.	50	44	158	
SE.	38		88	
E.	9		10426	
NE.	-			
R.	293	11		
	37	6		
	330	17		

Whale-movements at South Georgia 1922/3.

YY

	Jan.	Feb.	Mar.	April.
N.	1	15	14	2
NW.	6	16	31	44
W.	10	5	31	10
SW.	20	18	1	16
S.	4	6	5	7
SE.	24	16	14	5
E.	20	21	16	11
NE.	10	20	28	4
	<u>95</u>	<u>117</u>	<u>140</u>	<u>99</u>
R.	121	180	143	73
	<u>216</u>	<u>297</u>	<u>283</u>	<u>172</u>

Fins.

N.	32	13	6	10
NW.	22	19	13	24
W.	24	11	1	3
SW.	2	10	-	14
S.	5	15	6	5
SE.	45	13	17	22
E.	47	3	18	6
NE.	42	19	7	26
	<u>219</u>	<u>103</u>	<u>64</u>	<u>110</u>
R.	102	130	78	62

R. Represents no direction given.

	Moving	Not moving	
Blue	451	517	968
Fin.	496	372	868
Sei.	2	1	3
H.B.	31	140	171
Sperm.	3	8	11
	<u>983</u>	<u>1038</u>	<u>2021</u>

● **Whale movements at South Sandwich Isds 1947/8**

Note. This is SS Sevilla's operations. No forces received for SS Anglo-Norse.

b. The balance after the opposite direction has been subtracted. R. the number not moving.

Blue.

	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.
	b	b	b	b	b	b
N.	1	11	5	-	-	-
NW.	9	31	6	6	32	12
W.	6	23	3	5	7	-
SW.	8	20	54	27	23	-
S.	9	43	19	12	-	-
SE.	-	6	5	13	2	-
E.	-	1	14	3	-	-
NE.	-	-	5	3	-	3
R.	<u>33</u>	<u>135</u>	<u>139</u>	<u>69</u>	<u>66</u>	<u>15</u>
	59	170	193	87	92	16

Pins.

N.	-	-	-	-	-
NW.	1	-	-	-	-
W.	-	-	1	-	-
SW.	-	-	-	-	-
S.	2	-	5	-	-
SE.	-	-	14	-	-
E.	2	-	-	-	-
NE.	-	-	14	4	-
R.	<u>5</u>	<u>34</u>	<u>20</u>	<u>4</u>	
	5	34	20	4	

	Blue	Pins	Total
Moving	447	43	490
Not Moving	170	20	190
	<u>617</u>	<u>63</u>	<u>680</u>

(34)

Naturalist Dept:

Stanley.

24 January 1929.

Sir.

I beg to submit three copies of a paper on the movement and distribution of Blue, and Fin whales in the Dependencies.

Dr, S. Keap. D.Sc. the Scientific Director of the R.R.S. Discovery has invited me to write this, a joint paper, with a view of its early publication. It will be seen that the text of the paper is quite short, while the attached matter is of considerable volume, and from its nature, single copy, only, is possible.

A I would ask that the Public Works Dept should pack and ship the bundle of subject matter by the first boat leaving for the U.K.

Charts of South Shetlands will be prepared uniform with these as early as possible.

I am,

Sir.

Your obedient servant.

A. J. Bennett
Ag: Gov: Naturalist.

To the Honourable
the Colonial Secretary.

✓

Use a separate form for each whale.

Bruge forskjellig form enhver hval.

1. Date
Datum.
2. Condition of wind, weather and sea
Tilstand av vind, veiret og sjøen.
3. Condition of ice
Tilstand av isen.
4. Direction in which whales travelling
Hvilken vei var hvaler reising?
5. Number in school
Number av flok.
6. Position of catcher (approximate)
Tilnaermelig position av hvalbaad.
7. Distance from land (approximate)
Avstand fra landen.

8. Were whales captured male or female
Hvar hvalen er skuddt om hun eller han

Blue
Blaa.
Fin
Finn.
Humpback
Knøl.

.....(Signature)
Signatur.

Whaleboat ""
Hvalbaad.

A PAPER ON WHALE MOVEMENTS AND DISTRIBUTION
IN THE DEPENDENCIES OF THE FALKLAND ISLANDS.

To accompany this paper for forwarding to
Dr. S. Kemp. D.Sc. In single only:-

82 Charts (R.R.S. Discovery) showing the position
of Blue, and Fin whales killed at South Georgia for
each month of each season (6) 1922/3 to 1927/8.

Graphs showing the annual catch of Blue, and Fin whales
1922/3 to 1927/8.

Graphs showing the monthly catch covering the
same period.

Tracings of graphs showing the balance of movement
covering the same time and species.

32

ON THE MOVEMENTS OF WHALES IN THE DEPENDENCIES OF THE
FALKLAND ISLANDS.

In an effort to ascertain the movement whales may take in the course of a season, forms as attached, were issued to all licenced whalers operating in the waters of the Falkland Islands Dependencies.

Data derived from these forms have been tabulated starting with the season 1922/3.

As might be expected, the introduction of books of forms was much disliked among whalers, with the result that the returns for the first season are poor. They have improved considerably since.

The principal whales caught are the Blue, and the Fin, and of these 147000 have been reported, 107000 of them travelling in a given direction. No account has been kept of the rarer whales.

THE FORMS SUPPLIED.

The forms used is here described.

Item 2. Conditions of wind, weather and sea.

In the experimental stage of working out this data efforts were made to co-relate wind and whale direction, in every case the results obtained was the prevalent winds.

" 3. Conditions of ice.

The attempts at co-relating ice and the direction in which whales move proved negative, probably due to the too circumscribed areas involved.

" 4. Direction in which whales travelling.

In most cases this is given, and I believe correctly. There is the careless minority amongst gunners who are far from satisfactory in this item, fortunately they generally give non-committal answers that do not materially affect the results.

I would here point out that owing to the circumstances there is some change each year in the gunners at each place. There cannot be collusion for there is no object to be gained, while the results shown in directional steps

(submitted with charts) show a constant and very definite movement that is almost opposite when comparing South Georgia with South Shetlands.

Item 5. Number in school.

This is apparently well filled in. In a few cases exceedingly large numbers are shown, and usually recur in the same individuals papers. I have entertained very grave doubts as to the truthfulness of many such forms. There is the saving possibility that these particular gunners have estimated the total whales seen that day, instead of the actual school pursued.

" 6. Position of catcher.

Not a few gunners appear to mis-interpret this item and fail to give a position of any value.

" 7. Distance from land.

Generally given though not always of sufficient value together with No 6. to plot on a chart. Where given the position may be considered as correct to within five miles.

" 8. Were whales captured male or female? and the species.

The species can certainly be relied upon, for it is from ~~MAN~~ this that wages are derived. The sexing is in many cases added. This latter has not been tabulated because it is supplied in a better way on Brit: Mus. N.R. 132a.

Quite the majority of gunners do, I believe, furnish returns reasonably approximate to the truth. strict accuracy cannot be expected from ~~MAN~~ people following such a calling and under the severe conditions prevailing. I think it is much to their credit generally that so large a proportion at least appear to try and give the co-operative assistance demanded.

The charts prepared from these forms plotting the kills of the two principal species show remarkable uniformity. (South Georgia only) Laid out and compared with one another, and also compared with the directional stars, monthly graphs of whales caught, and annual graphs of whales caught show:-

Blue whales.

South Georgia. Six years. 1922/3-1927/8.

October. Direction Easterly. Harbours small but catches fairly constant, are to the NE. of the centre of the island, and fairly close to land. Except ~~xxx~~ in 1923/4 very few caught to the W. and SW. of the island.

November. Direction Easterly, with a tendency to move further off land.

December. Direction Easterly. Whales are further from shore, this may be due to better weather enabling the boats to go further afield. In three of the six seasons Blue-whales caught reached their summit.

January. Direction Easterly. There is a tendency to scatter, and in later years to be present at the ends of the island in preference to the NE centre.

February. Direction Easterly. Numbers declining rapidly.

March. Direction Easterly and N. Westerly. Some years captures are very close inshore.

April. Direction Westerly. The catch area is very uncertain.

May. Like September is of little value, even when whaling is conducted in these months it is but for a few days.

Good years are characterised by the constant site of capture being N.E. of the centre of the island.

Bad years, and portions of bad years may be due to the absence of whale food, and this in turn due to the excess or failure of the great N.E. drift.

Fin-whales.

South Georgia. Six years 1922/3-1927/8.

October. Direction North and East. Numbers very meagre and scattered.

November. Direction North and East. Numbers small.

December. Direction East and N. East. Numbers increasing.

January. Direction East and S. East. Are caught further off land.

February. Direction East, and S. East. Fins draw closer to land. December, January, and February are the summits of catch at South Georgia, while South Shetlands is one month later.

March. Course, and area of catch becomes uncertain. There is a drop in the numbers caught.

April. Direction uncertain. Numbers falling. There is a tendency to come nearer to land, and even to the South side of the island.

May. Erratic.

General.

On the whaling grounds Bluewhales are much preferred to the Fins, not the least reason being the higher bonus paid for their capture. The taking of Finwhales is largely dominated by the abundance of Blues present.

Statistics of the principal whales caught in the last 19 years at South Georgia shows that 42% have been Finwhales, and in the last 17 years at South Shetlands 55.7% were Fins. It is clear from this that the former has the best attractions for the Blue-whale, and the latter for the Fin-whale.

Local distribution, and density of the whale population in any given season is undoubtedly governed by the amount of food present. The movement of Blue, and Fin whales differ somewhat, yet they both abandoned the N.E. side of S. Georgia completely January-March 1927/8, whales only being caught at the S.E. end of the island.

5.

The directions taken by whales as shown by the balance graph stars are in places confusing. I think it not unlikely that it may later be found to be due to the movement of quite different herds making to, or from a different winter habitat.

A. G. Bennett

Acting Government Naturalist.

25 January 1929.

M.P. 6/20/27.

GOVERNMENT HOUSE.

STANLEY.

FAIKLAND ISLANDS.

NO. 32.

16th February. 1929.

Sir,

I have the honour to forward copies of two letters with enclosures addressed to the Colonial Secretary by Mr. A. G. Bennett, Acting Government Naturalist, and dated the 24th January, 1929, relative to statistical matter on whale movements in the Dependencies, which has been compiled by Mr. Bennett in accordance with the desire to such end stated to have been expressed by Dr. S. Kemp, D.Sc. of the Discovery Expedition.

2. I would ask, if you think so proper, that these documents may be communicated through the appropriate channel to Dr. Kemp.

3. I would add that the case of detailed charts and graphs is being forwarded by a suitable opportunity at an early date to Dr. Kemp, c/o The Secretary of the Discovery Expedition.

I have the honour to be,

Sir

Your most obedient,
humble servant,

THE RIGHT HONOURABLE

L. C. M. S. LAMBERT, P.C. M.P.
SECRETARY OF STATE FOR THE COLONIES.

ARNOLD HODSON.