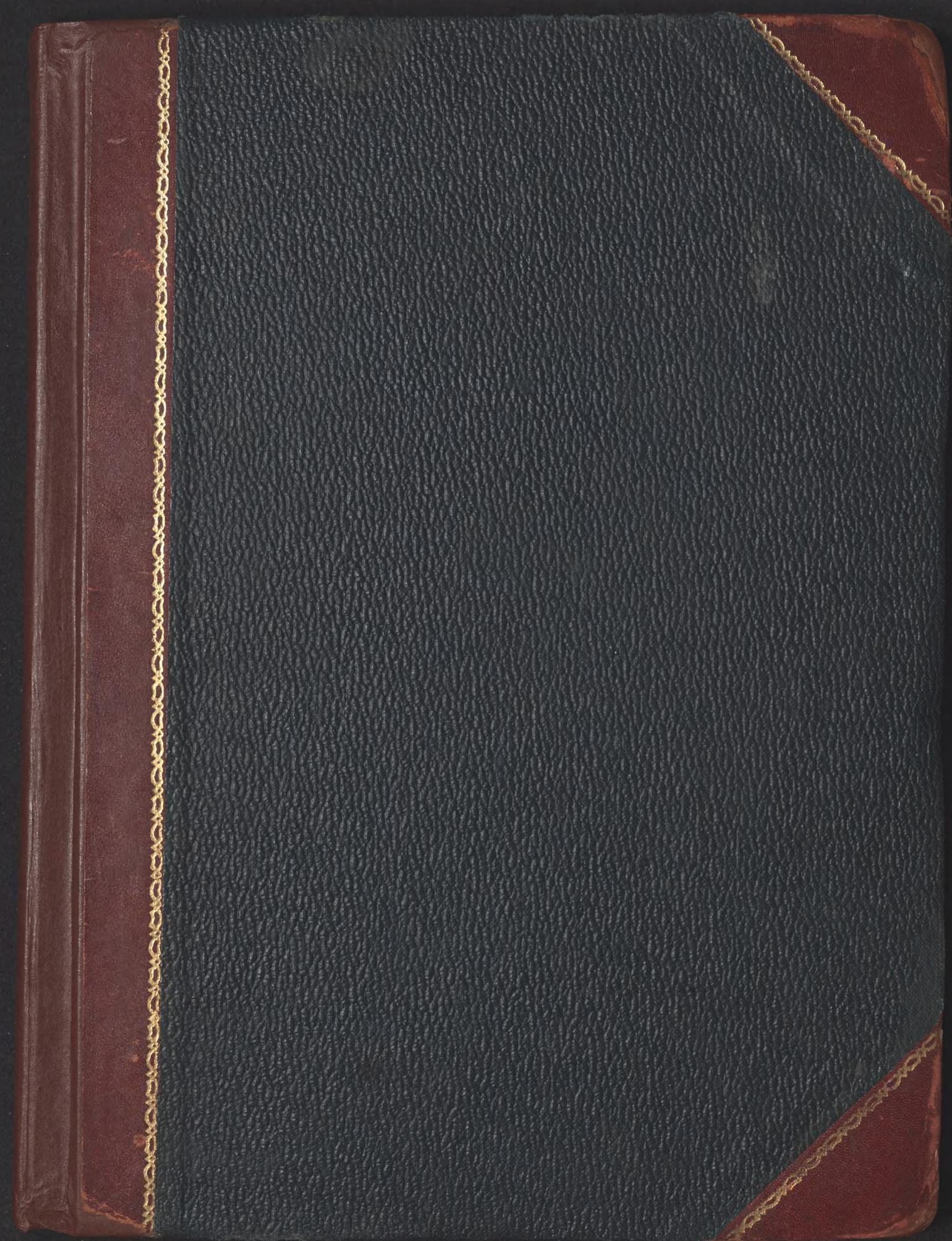










|                  |             |
|------------------|-------------|
| ♀ no. 1 - 1300 = | 42' 8"      |
| 2 - 1160 =       | 38 - 1"     |
| 3 - 1240 =       | 40 - 8 1/2" |
| 4 - 1120 =       | 38 - 5"     |
| 5 - 1143 =       | 37 - 6 1/2" |
| ♀ 6 - 1317 =     | 43 - 3"     |
| 7 - 1202 =       | 39 - 5 1/2" |
| 8 - 1240 =       | 40 - 8 1/2" |
| ♀ 9 - 1160 =     | 38 - 1"     |
| 10 - 1050 =      | 34 - 5 1/2" |
| 11 - 1075 =      | 35 - 3 1/2" |
| 12 - 1190 =      | 39 - 1"     |
| 13 - 1250 =      | 41 - 1/2"   |
| 14 - 1180 =      | 38 - 1"     |
| 15 - 1085 =      | 35 - 7 1/2" |
| 16 - 1180 =      | 38 - 9"     |
| 17 - 980 =       | 32 - 2"     |
| 18 - 1190 =      | 39 - 1"     |
| 19 - 1180 =      | 38 - 9"     |
| 20 - 1250 =      | 41 - 1/2"   |
| 21 - 1225 =      | 40 - 2 1/2" |
| 22 - 1240 =      | 40 - 8 1/2" |
| 23 - 1235 =      | 40 - 6 1/2" |

[Whale notes & measurements  
Korea, Jan. - Feb. 1912]



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N. B.

All these whales have been 'cut in' while lying in the water at the end of the wharf and never pulled out upon a slip. Consequently the total length measurements had to be from the sections as I could get at them and are usually in a straight line. In many instances there was considerable doubt as to the accuracy of the measurements & in <sup>such</sup> ~~these~~ cases I have questioned it; there may be inaccuracy ~~in some~~ of these not questioned but I think they are fairly correct. The "snout to axilla" measurement is always in a straight line. The "snout to eye" is straight along the side of the head & is ~~also~~ a straight line. The "snout to blowhole" is over the curve of the rostrum. The two "depth of peduncle" measurements are over the curve of the body. The "length of baleen row" is straight from out. to post. ends inside. The "length of baleen plate" is straight inside but does not include bristles - it is always taken while baleen is in situ.



No 1

Set of Gray whale - Jan 8, 1912 Mussey, Korea  
 Ground color of body very dark slate;  
 almost black. Lower half of body from  
 navel to flukes ~~marked~~ covered with  
 longitudinal bands of light gray oblong  
 and elliptical in shape - also patches &  
 blotches of white - many fine & light  
 lines on back making it look decidedly  
 grayish. Head has much whitish  
 about snout and on upper lips just  
 above baleen gums - white also runs  
 up rostrum for considerable distance -  
 dorsal ridge from a low hump to  
 flukes serrated much like a Hump-  
 back but not quite so strongly -  
 the "hump" is well marked and about  
 two or three ~~as~~ inches high -

The two throat creases begin 6 cent  
 from tip of lower jaw - ant. ends  
 of creases are 15 cent apart

Flippers dark slate above with both  
 margins and tips whitish, the light  
 color running far up on upper sur-  
 face of fin

Flukes above dark slate with  
 many white dashes and white  
 circles like those on Humpback which  
 are undoubtedly caused by parasites  
 carried - many barnacles <sup>(crustacea)</sup> embedded  
 in back & ends of flukes & flippers



about genital and head much infested  
with a large Cyamus - many patches  
on top of head near blowholes with  
Cyamus. All over body are many  
irregular white streaks which I take  
to be scars caused by rubbing  
against rocks - On left injured at  
13 ribs - tip.

### Measurements of no 1

| no | 1 | cent. |
|----|---|-------|
|    | - | 1300  |
| 2  | - | 250   |
| 3  | - | 224   |
| 6  | - | 410   |
| 7  | - | 485-  |
| 12 | - | 310   |
| 13 | - | 150   |
| 19 | - | 80    |
| 21 | - | 228   |
| 22 |   | 137   |
| 23 |   | 205   |
| 24 |   | 75    |
| 25 |   | 56    |
| 26 |   | 2     |
| 27 |   | 23-   |
| 28 |   | 25-   |
| 29 |   | 7     |
| 30 |   | 23    |
| 31 |   | 220   |
| 32 |   | 40    |

Tip of snout to occipital condyle  
straight (below) = 305-

Reg. of baleen to tip of snout  
Baleen rows at widest point  
stand apart at tips 72

Baleen rows at ant. ends  
are apart 15 cent.

Snout to ear = 300

Ear is a little above the eye



Fetus No 1a from No 1

Hairs There are six irregular rows of white hairs each about  $3/4$ " long on each side of the head; the rows are so distributed that they cover the entire head quite thickly - there are 16 hairs in the median row on the dorsal ridge of the head -

the ~~most~~ <sup>most</sup> posterior of the hairs is on the left side of head opposite the post. end of blawholes.

Each hair is situated in a small pit & surrounded by a dark circle 21 hairs in 3 irregular rows on left ramus - <sup>also right</sup> posterior hair is about opp. four inches in front of mouth.

At mandibular symphysis there are on the ~~40~~ left side 40 hairs in three irregular vertical rows - very close together.

Flukes

The proximal <sup>dorsal edge</sup>  $2/3$  is rather straight but in the distal  $1/3$  the edge becomes very convex - posteriorly the outline is very strongly convex until at the last  $1/4$  it dips in sharply & is then

forms a strong emargination. No other whale that I have seen has flukes of this shape. The posterior edges are irregularly "waved" or crenulated - The notches

on body of  
white part of  
the up of the  
ray



is deep - post. edges of pectorals  
are thick - rest thin like the  
Balænopteras

Fins

The anterior edge is rather  
thick and slightly convex -  
the post edge is thick and <sup>strongly</sup> convex  
an indistinct angle being  
formed at the junction of  
the proximal & dorsal fin - the tip is blunt.

Head

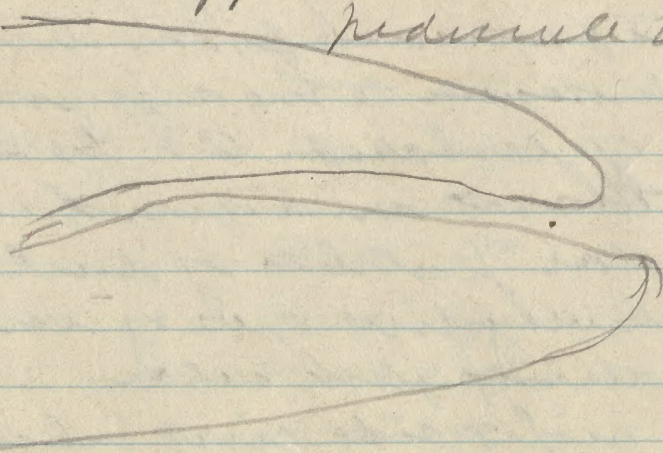
The head reminds me strongly  
of a Right whale. The <sup>dorsal</sup> outline  
gives strongly to the blubber  
which are situated at a slant  
upward of about  $38^\circ$ . There  
is a distinct flattening  
in section of body just  
behind blubber. The eye is  
prominent & situated just  
behind & above corner of mouth.  
Iris light yellow &  $1\frac{1}{2}$ " long.

Body

The outline of dark front half  
way between eye & mouth gives  
rise in a strongly convex  
curve to the dorsal fin where  
it becomes straight.  
From hump to fork dorsal  
outline is rather straight.  
Just behind anus ventral outline



there is a sharp dip + 6 fimbriae  
nearly straight; fin almost ant.  
most of flippers ventral midline  
is regularly convex - fold  
furrows in throat  $1\frac{1}{2}$ " deep  
part of furrow is half  
way between eye & ear - for  
this whale eye is a little above  
ear - Lower jaw 4 cent longer  
than upper. Blubber measure of  
pectoral 4 cent thick



Color

Ground color gray. There is a rather  
distinct line at the sides formed  
by the transverse processes of the  
vertebrae and the lower part of the  
body below this line is thickly mark-  
ed with irregular oblong & oval spots  
of very light gray; these spots are  
longitudinal and follow axis of  
body. There is more of the light  
than the dark color here. These  
extend forward on the lateral and



ventral sides of the body almost as far as the posterior insertions of the fins. The back above the line of trans. prac. is ~~about~~ <sup>the</sup> plain light gray <sup>(or the spots begin)</sup> rather thinly marked with dark gray oval & oblong spots. The body from the post. inst. of fins forward both above & below and also the head is light gray. a line of small dark gray spots & dashes extends forward from the line of trans. v. process to the eye front <sup>approx.</sup> the post. inst. of pectorals. On the light gray of the throat are a few & rather large irregular patches of dark gray & a few very fine ones of very light gray almost flesh color.

On right side just behind tip of pectoral last back ~~is~~ a white circular spot about  $1\frac{1}{2}$ " in diameter. Also there is a smaller spot just above just above post. inst. of fin.

Petals

Plain dark gray above with lighter post. & ant. edges. Fin is lanceolate & not like Common's figure but the tip is blunt.

Fishes

Below have dark gray ant. & post. margins & rather coarse whitish line (broken) running across flukes



transversely occurring mixed  
toward notch. The <sup>back</sup> surface of the  
plumes show more whitish than  
grayish.

Cur of Cordy

1 Cur of body around is 210  
widest part is opposite tip of pin  
laid back

Total length straight = 436 - cent  
cent.

W1-476

2016 - 40

2-81

11 47 - 13

3 - 74

11 18 - -

4 - 152

19 - 29

5-11-11

20 - 49

6 - 141

21 - -

7 - 177

22 - 67

F - 302

23 - 94

9 - 45-

24 - 33

10 - 75.

25 - 24

11 — —

26 - 1

12 - 1035-

27 - 9

13 - 62

28 - 9

14 - 60

29 - 4.5.

15- -

30 - 9

34 - 2

7 blues  
- north & peris. 187

Length of lateral furrows 4-9

Dist. apart of furrows anteriorly = 6

11 11 11 11 posteriorly = 16

11 " " " fins below (ant edges) = 50

Cur. of body at incident - 210







## measurements of no 2

no 1 - 1160 (not very certain) no 22 - 165-

2 - 220

" 24 - 90

5 - 469

25 - 55-

6 - 370

31 - 203

12 - 320

32 - 48

19 - 76

Tip of snout to beginning of

20 - 110

balcon (straight) = 28

21 - 240

no 3 Gray whale, ♂, Dec, 8/12. Muesan

A dark individual, there being much less white on this whale than on the last one. The ground color is black or very dark slate. The body bears a good many circled scars but has comparatively few light markings of other sorts.

On the head above the dorsal ridge & on sides of rostrum there is considerable lighter gray - many scars (circled) on peduncle sides.

Flukes

Lower surface of flukes sparsely dotted and barred with white.

Flippers

On both sides there is considerable white in a longitudinal band between the fingers, a few circles and spots of white on other parts of flipper - post. margins white.

Gnarled  
fingers

There are three fingers in this individual. The one on the left side is 150 long, then comes



a standard, 100 long, then another long  
are 116 Arranged like this:

$$\begin{array}{r} 150 \\ \hline 100 \\ \hline 116 \end{array}$$

### Measurements of nos

no 1 - 1240

no 2 - 220

2 - 227

22 - 160

3 - 220

23 - 190

6 - 370

24 - 94

7 - 450

From eye to first dorsal line

11 - 5

over and under of head

12 - 302

the dist is 94

19 - 70

no 4 Gray whale ♂ Jan. Spallbrun

Admired ~~boat~~ and body forward to  
pectoral fins ~~with~~ had dorsal line  
black, or dark slate, & the sides with  
many small spots & dashes of white  
beside many circles (circled scars) There  
is no white about lips or ram of  
mandible. Rostrum very light gray  
but not much white.

Fin Dark slate above with a longitud-  
inal band between the fingers  
whitish as are a few large clusters  
of scars (circled). Ant. edge of  
fin is dark - post. edge white



Baleen. Bristles of posterior half dark gray  
those of anterior half yellowish-white.  
Throat. There are three throat furrows, an-  
gled as follows - the ant. ends <sup>of the 2 outer</sup> are 32 of ant.  
furrows  $\frac{165 - \text{cent.}}{50}$

$\frac{130}{165}$  32 anterior  
Between  $\frac{165}{50}$  the posterior ends of 2 outer it is  
50 cent

### Measurements of no 4

Length = 1170

Snout to eye straight = 222

" " blowhole (over ears) = 210

Fin tip to head humerus = 220

" " " port. insertion = 145-

" greatest breadth = 79

Length of baleen row (straight) = 198

no. 5.

Gray whale, Jan. 9 / 12 Three an, Korea  
A very dark whale. Entire forehead  
dark slate, or black, with a few <sup>small</sup> light  
gray patches on the lower half, the  
upper half being plain save for a  
few large white striped scars.

On the back & sides near the fins  
there are a few indistinct gray  
markings, but many barnacles.  
Rest of whale all black or dark slate.

Mucous membrane in the roof of  
the mouth light pink as are the



upper lips just above the baleen base  
 Flukes upper & lower surface black with almost  
 no light color of any kind.

Flipper Above black except for two or three  
 large white circles - Below has  
 one large oblong patch of white between  
 the fingers.

Baleen Bristles have anterior half very  
 light yellow shading to grayish  
 in post. half.

Throat  
 furrows There are two throat furrows  
 each 160 cent. in length.

On the snout are a number  
 cornified layers resembling the  
 bones of a Right Whale.

Humps prominent - there are  
 eight crenulations beside the  
 hump on the dorsal peduncle  
 ridge.

Blubber is a very deep pink -  
 on the side by the fins the blubber  
 is 7" thick and on the dorsal  
 ridge 30 cent.

### Measurements of nos

|      |        |      |       |       |       |
|------|--------|------|-------|-------|-------|
| no 1 | - 1143 | no 7 | - 413 | no 20 | - 140 |
| 2    | - 218  | 12   | - 290 | 21    | - 222 |
| 3    | - 205  | 13   | - 155 | 22    | - 150 |
| 4    | - 366  | 14   | - 160 | 23    | - 190 |
| 4    | - 363  | 19   | - 68  | 24    | - 83  |
|      |        |      |       | 25    | - 120 |
|      |        |      |       | 26    | - 49  |



no 6, Gray Whale, ♀, Jan. 9/1889, Korea  
 A very dark whale. On the peduncle  
 there are only a few cirsipal scars,  
 & no gray markings - along the  
 dorsal ridge there is a little white  
 (not scars) from fins forward  
 almost plain black ~~on~~ on sides & <sup>back</sup>.  
 Breast throat & belly plain except  
 on belly a large, light gray, irregular  
~~light gray~~ patch, and on the left  
 side of the throat just above its furrow  
 there are a few large stripes of white  
 which seem to be scars.

Fin Above black with few white circles -  
 below is marked with white in a  
 way to give a marbled appearance; there  
 are also many circles of white

Baleen

Bristles all yellowish white

Furrows

Two both 170 cent. in length.

Tumor

On the ventral ridge half way  
 between anus and flukes was a  
 large hunch which when cut into  
 proved to be a hollow tumor filled  
 with white pus.

The crenulations on the dorsal  
 ridge are indistinct there being  
 only four well marked.

There are a great many barnacles  
 deeply embedded in its peduncle.

(See other side)



## measurements of no. 6.

|      |                          |        |       |       |       |
|------|--------------------------|--------|-------|-------|-------|
| no 1 | - 1317 (O.K. along side) | no. 12 | - 306 | no 31 | - 210 |
| 2    | - 244                    | " 21   | - 220 | 32    | - 46  |
| 3    | - 220                    | " 22   | - 140 |       |       |
| 4    | - 390                    | " 23   | - 190 |       |       |
| 6    | - 322                    | " 24   | - 88  |       |       |

no. 7

Fin

Gray whale ♂ Jan 9/12 Musan  
Two broad bands of white from tip and  
a large patch near base on the under  
side - Above there is little white

Rostrum

The dorsal ridge & whole distal third of  
rostrum cornified - no white on the  
rostrum - many Cyamus about  
blowholes & in two patches just posterior  
to it.

Baleen

Bristles of posterior  $\frac{1}{2}$  dark gray - ant-  
erior  $\frac{1}{2}$  yellowish-white.

Blubber on the throat & whole part. end  
of furrows is 8" thick - there are  
2 throat furrows.

## measurements of no. 7.

Total length = 1202 (fully seen)

↳ snout to fin = 475 -

Length baleen = 215

\* " " eye = 250

Length plate = 40

" " blowhole -

Flukes & caries = 346

Fin tip & head hump = 225

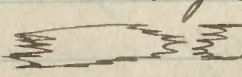
" " " post. vent. = 160

Breadth of fin = 89

Tip & ant. vent = 185



no 8

Gray Whale of Jan 1, 1912 Muesan  
 The whitest whale I have yet seen. The  
 peduncle and both sides of fins are  
 covered with blotches of white about  
 10" long & 4" wide, of fairly regular in  
 size - the edges of the blotches are irreg-  
 ular  - mid ventral ridge  
 of peduncle in place is dark black as  
 is ~~mid~~ dorsal ridge except for a  
 circular patch of white about 12" in  
 diameter. On the back the white  
 patches are replaced by small white  
 dots & circles very thickly scattered  
 From fins forward the sides of throat  
 & breast are <sup>thickly</sup> streaked with <sup>longitudinal</sup> gray  
 lines about  $\frac{1}{4}$ " wide. <sup>The quality of throat thickly streaked with gray</sup> Right flippers  
 of mandible & lip white & gray mixed  
 "pepper & salt" Right side rostrum for  
 whole way "pepper & salt." Apparently  
 many small barnacles had fastened  
 here. Dorsal ridge of rostrum almost  
 all white with but few gray specks - very  
 rough apparently from parasites -  
 Left side rostrum like top - almost  
 white.

Flukes

Above black <sup>thickly</sup> ~~thickly~~ circled with white.  
 Below " <sup>thickly</sup> " " "

Fin

Below has two broad longitudinal  
 bands from tip downward the one  
 toward the fore edge being longer



there are also many smaller patches of white (rust scars)

Above much the same but with little less white, there being only on throat band from tip inward.

Baleen

Brushes of part  $\frac{2}{3}$  gray - anterior  $\frac{1}{3}$  white

Hump long & low but well marked  
Bluish on belly just anterior to penis 2" thick

9 crenulations beside hump

Tongue light pink

Two throat furrows 150 long

measurements of not

|      |        |       |        |                 |
|------|--------|-------|--------|-----------------|
| no 1 | - 1240 | no 18 | - 330  | ear opening = 2 |
| 2    | - 240  | 19    | - 75   | eye " = 6       |
| 3    | - 207  | 20    | - 127  | ear on an up    |
| 4    | - 390  | 21    | - 230  | slant - ear     |
| 6    | - 335  | 22    | - 160  | easily raised   |
| 7    | - 405  | 23    | - 180  | penis.          |
| 9    | - 120  | 24    | - 90   |                 |
|      |        | 25    | - 53   |                 |
|      |        | 26    | - 50.5 |                 |



w9 ♀ Gray whale Jan 10/12 Mureau Korea  
Sides to fin and the peduncle blotched  
with light gray fairly regular in size  
not so many as the peduncle as on  
the sides - Ventral region almost plain.

w1 38' ?? 12 - 225'

4 - 365' ? 19 - 20

6 - 323 0 135

w10 ♂ Gray whale Jan 10/12 Mureau Korea  
a ~~dark whale~~  
Peduncle black with few white circles  
and spots on sides - dorsal & ventral ridges  
plain. From anus forward on sides  
there are a good many large, gray oval  
& oblong patches. Sides thickly studded with  
barnacles. On either side of dorsal  
"hump" are patches of light gray, almost  
white and a large white spot on right  
side. <sup>beside eye light gray patch just anterior to penis.</sup>  
Throat & lips plain dark - almost  
no lighter color.

Flukes Black above & below save for a few white  
circles; the distal half of posterior edge all  
white - posterior edge at thickest near  
notch is 1" thick & at thickest (a short  
distance from distal end) is 2" thick.

Fin Above black with only one white spot  
Funnels Two, each 165 long. The funnels lie  
each side of center line of throat. A line  
drawn from the mandibular symphysis  
down the throat would go directly between them.



Tongue & as tip bitten off - teeth marks show & it must have been done by Killers

10 low crenulations including bump  
On the right side, distal half of rostrum the flesh has rotted away in many places the bone is exposed; the flesh hangs in a soft, green, and swelling mass.

|    |      |          |           |
|----|------|----------|-----------|
| W1 | 1050 | 9 - 125  | 22 - 156  |
| 2  | 200  | 12 - 360 | 24 - 85   |
| 4  | 320  | 16 - 106 | 25 - 52   |
| 6  | 350  | 20 - 126 | 26 - 50.4 |
| 7  | 425? | 21 - 224 | 31 - 182  |

no 11 Gray Whale ♂ Jan. 10/12 Musan, Korea  
A light whale.

The sides of peduncle so thickly washed, & circled, & marked with gray & white that there is much more light than dark color. Dorsal & ventral ridges of peduncle plain black - Sides of body & fin like peduncle - Almost nowhere on lips or throat or rostrum.

Flukes

Under side black rather thickly circled and spotted with white circled scars.

Upper side is washed with gray-white on whole posterior half of each lobe.

Fin

Very few white circles on fin

Furrows

2-furrows 15.3 long - 8 crenulations including



Tongue  
eaters the hump which are not well marked  
whole distal portion of tongue eaters  
away the teeth marks being plain;  
also a bite of out of the lip in the prox-  
imal portion of its mouth.

Baleen  
no 1 - 1075? 7 - 375 21 - 220  
2 - 220 12 - 300 22 - 155  
3 - 210 13 - 175 24 - 85  
4 - 380 16 - 112 31 - 200  
6 - 305 19 - 80 32 - 45

no 12 Gray whale ♂ Jan 11/12 Mureau Korea  
no 1 - 39' (by cutters) 6 - 350 31 - 204  
2 - 225 25 - 53  
3 - 205 26 - 5

(Skeletons taken)

no 13 Gray whale ♂ Jan 13/12 Mureau Korea  
Peduncle from flukes & anus has  
few gray markings but many  
white barnacle scars (many barnacles  
in position) Sides from anus to fins  
have many large gray blotches & oblongs  
but few barnacle scars. There is also a  
large area of clear light gray on the sides.  
Ventral & dorsal peduncle ridges plain  
black -

Fins Below black with a number of white spots  
joining to form a band between second



There are 13 pairs of ribs: 10 chevron - 56 vertebrae.  
 The left scapula is ~~not~~ from a different whale.  
 It was broken & I had to substitute another  
 one. One or two of the phalanges are gone.

A third finger about two feet longer  
 a good many other white spots and  
 circles along posterior edge - rest of  
 fin almost plain.

Above almost same but with little  
 less white. Post. edges of both fins &  
 flukes about  $1\frac{1}{2}$ " thick.

Baleen  
 Bristles of post.  $\frac{2}{3}$  grayish - anterior  
<sup>yellow</sup>  
 $\frac{1}{3}$  white.

Crenulations  
 9 ~~well~~ well defined crenulations beside  
 hump - 10 is all

Furrows  
 Two furrows 165 long  
~~not~~ (The total length of this whale is accurate  
 but is taken in a straight line)

|      |        |                    |          |          |
|------|--------|--------------------|----------|----------|
| no 1 | - 1250 | 7 - <del>350</del> | 22 - 160 | 33 - 158 |
| 2    | - 245  | 12 - 302           | 24 - 92  | 34 - 2   |
| 3    | - 232  | 19 - 70            | 25 - 62  |          |
| 4    | - 440  | 20 - 126           | 26 - 60  |          |
| 6    | - 375  | 21 - 230           | 31 - 219 |          |

no 14 Gray Whale ♂ Jan. 13, Musan Korea  
 A very dark whale. Peduncle almost  
 entirely black with a few gray markings  
 on the lower  $\frac{1}{2}$ . From penis & feet  
 on left side a large plain light gray  
 patch about 2 feet wide. Not same on  
 right side instead there are a number  
 of rather dark gray oblong markings -  
 about chin & on throat many small



white flecks & scars - also a good many  
on breast just between fins - rest of  
breast & belly plain ~~dark~~ black - Head  
has practically no white or gray - few  
cyanures

Paleen

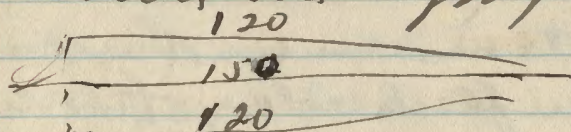
Bristles all yellowish - white

Roof of mouth light pink - ~~tan~~

Furrows

Three throat furrows - the two outer ones  
being 120 long & the middle one 154.

This is perpendicular with middle furrow  
as long as sits on it if it is present at  
all. The middle furrow is exactly  
in the center of the throat in a line  
with the symphyses



There are ten crenulations on the peduncle  
including the hump (those nearest  
the hump are in all examples the  
best developed)

|    |           |          |
|----|-----------|----------|
| w1 | - 38' 0/4 | 26 - 5'  |
| 2  | - 210     | 31 - 185 |
| 3  | - 196     | 32 - 38' |
| 6  | - 335'    | 34 - 3   |
| 12 | - 310     |          |
| 16 | - 105'    |          |
| 20 | - 115'    |          |
| 25 | - 50      |          |



w. 15' Gray whale ♂ Jan. 14/12 Almasan, Korea  
 A dark whale. Upper half of peduncle  
 plain black - lower half thinly  
 covered with rather small gray  
 markings ("öbeng") & a few barnacle  
 scars. Sides from anus to fins  
 have a good many light gray patches  
 with whitish edges which almost  
 join; these also cover the belly but  
 do not extend on to the back -  
 Head has a little white on dorsal  
 surface of rostrum and a good  
 many white barnacle scars on the  
 sides -

7 hemulations on back (not well marked)  
 Blubber a flesh color (the lightest  
 I have seen)

Funnus Two funnuses 145 long anterior ends  
 19 apart & posterior ends 55  
 Ear meatus the size of an ordin-  
 ary pencil.

|            |          |
|------------|----------|
| w 1 - 1085 | 21 - 218 |
| 2 - 220    | 22 - 148 |
| 3 - 208    | 24 - 82  |
| 4 - 350    | 31 - 190 |
| 6 - 360    | 32 - 36  |
| 17 - 300   | 33 - 158 |
| 16 - 100   |          |
| 20 - 114   |          |



no 16 Gray Whale ♂ Jan 16/12 Musan, Korea  
 A ~~rather~~ <sup>light</sup> ~~black~~ whale. Sides of peduncle  
 covered thickly with irregular gray patches  
 touching & running into each other. (The  
 patches are gray in the center shading to  
 white at the edges & broken by a number  
 of small black spots & dashes.) Ventral  
 & dorsal regions of peduncle plain.

a lot of white on top  
 otherwise plain black.

Sides from anus to fin with rather  
 small gray patches. Back between  
 fins plain black. A few gray patches  
 on head just behind blowholes.

A large white patch between anus &  
 penis just to the right of the ventral line.  
 Black below with a few white circles &  
 (look just like those of a Humpback)

Tip of right lobe white & has been injured.  
 Left fin above black with large white  
 circles - port. edge all white (injured)

Below with fewer circles but ~~fewer~~  
 several 'washes' of white

Throat furrows 150 - ~~150~~ - 60

150

60

150

|                 |          |             |          |
|-----------------|----------|-------------|----------|
| no. 1 - 1880 OK | 16 - 95  | 23 - 190    | 33 - 162 |
| 2 - 220         | 19 - 20  | 25 - 50     |          |
| 3 - 215         | 20 - 135 | 26 - 5 (OK) |          |
| 6 - 325         | 21 - 235 | 31 - 183    |          |
| 12 - 320        | 22 - 255 | 32 - 45     |          |



W 17 Gray whale ♂ Jan 16/12 Thurston  
 inner sides of rostrum lips & rams  
 "puffer salt" (more gray than dark)  
 Sides of peduncle body & back marked  
 with long gray lines like sciaenids  
 but probably not. a dark whale

Two throat furrows 120 long

Tongue is very perfect & was photographed  
 length 145 - (widened curve) 38

50 thick at thickest - tip cleft - flesh  
 pink - tongue is rounded with a narrow  
 flattened patch on top - tip inflexed  
 fairly solid.



W 1 - 980 very fine in straight line

2 - 175 Flukes are very soft below

3 - 165 with whitish lines running

4 - 310 transversely across something

5 - 280 like those on a blue whale's flukes.

6 - 350

21 - 180

22 - 120

23 - 68

31 - 155

32 - 32

33 - 148

34 - 2



no 18 Gray whale ♂, Jan 17/12 Mutsan, Korea.  
 A ~~very~~ dark whale. Pinnules very dark  
 slate with a few patches of gray on the sides  
 mostly on the proximal half. Sides of  
 body from anus to fins have ~~to many~~  
 rather dark gray patches; back between  
 fins unmarked save for a few small  
 barnacle excrescences. Rostrum sides &  
 top all very light gray; both rami  
 and lips are dark but shade in very  
 light gray about two feet from symphy-  
 sis.

Two throat furrows each 155 long  
 Tongue 170 long & 110 wide over curve  
 Hump prominent

Baleen has yellowish-white bristles  
 Right ramus has 16 long hairs in  
 two irregular rows - the upper & most  
 regular row contains 9 - the lower 7.  
 Fourteen hairs on left ramus in  
 several places there being two hairs  
 in one follicle.

|      |                                  |    |       |
|------|----------------------------------|----|-------|
| no 1 | - <del>1825</del> <sup>39'</sup> | 20 | - 130 |
| 2    | - 232                            | 21 | - 218 |
| 4    | - <del>130</del>                 | 22 | - 150 |
| 6    | - 350                            | 24 | - 85  |
| 12   | - 320                            | 31 | - 200 |
| 16   | - 110                            | 32 | - 45  |
| 19   | - 78                             |    |       |





no. 19, Gray Whale, ♂, Jan. 17/12, Ulsan, Korea.

A very white whale. Entire peduncle, sides & belly & fins thickly covered with small gray patches, circular oblong & irregular but with long axes with axes of body; the gray patches join each other so that there is more white & gray than dark. The ground color too is very dark gray & not black or slate as usual. The gray patches are about 6" long & 3" wide. Lower lips & distal half of rammer gray & white mixed.

|       |            |            |                |
|-------|------------|------------|----------------|
| no. 1 | - 1180 gk. | 21 - 228   | 2 funnos       |
| 2     | - 232      | 22 - 160   | each 160 cent. |
| 3     | - 210      | 24 - 88    | long.          |
| 4     | - 400      | 25 - 50    |                |
| 6     | - 345      | 26 gk. - 5 |                |

#### Skeleton taken

no. 20, Gray Whale, ♂, Jan. 19/12, Ulsan, Korea.

A rather light whale. Ground color ~~of~~ ~~dark~~ dark gray. Peduncle has a number of rather small gray blotches which became smaller posteriorly & are about four ft from flukes. Dorsal & ventral ridges of peduncle plain dark gray. Sides to fins have many gray patches and back, sides belly peduncle & in front. The whole body is thickly covered with white circifed scars.



Sides of rostrum & head to the eyes very light gray. Edge of upper lip just above baleen ~~on~~ flesh pink (as usual) for a band about 3" wide which extends for the whole length of the rostrum from the post. end of baleen. Very little gray on lips & around

Fins

Dark above with only a few white flecks - below has considerable white scattered over it in flecks, spots & circles. White post. edge.

Flukes

Dark above & below with but little white in circles & spots; white post. edge.

Baleen

Bristles of post.  $\frac{3}{4}$  dark gray & ant.  $\frac{1}{4}$  light yellowish. The bristles of this whale are the darkest I have ever seen.

Nose

About  $2\frac{1}{2}$  feet anterior to penis; appears as a roughly circular scar somewhat raised & form a low swelling, not white as is so frequently the case with other whales.

Cremulations

This whale had 14 cremulations on the back - more than any other specimen I have seen. They began about two feet from the flukes in the form of a low rounded hump, becoming more prominent as they went forward until a short distance behind the hump they were about three inches high. The "hump"

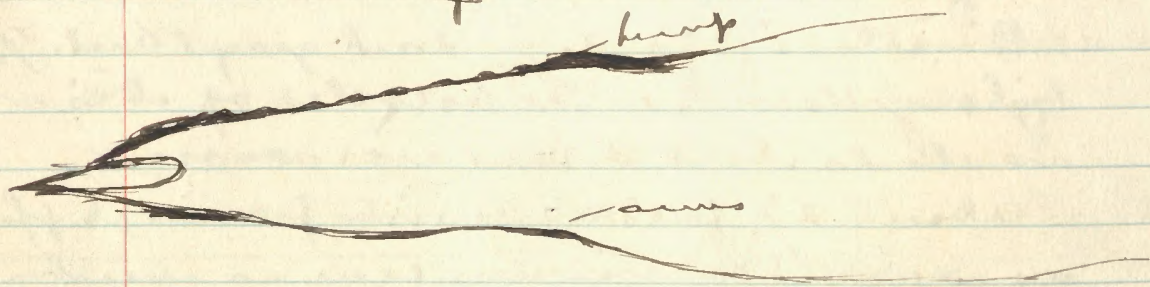


is the ending of the circulations & was well developed. There was about 8" or 10" between the bunches.

Furrows

This whale had four distinct furrows on the throat arranged as below

On <sup>each</sup> side of the rostrum just in front of its blowholes there is a prominent swelling ~~in the~~ about 3 feet long &  $1\frac{1}{2}$  feet ~~deep~~ wide. This makes a shallow depression which runs along the side of the head ~~for~~ being lost near the ~~top~~ snout.



The dip in the ~~to~~ <sup>ventral</sup> outline of ~~the~~ <sup>of the</sup> body at the anus is very prominent. Anterior to the anus the belly swells out suddenly; posterior to it the anterior of the peduncle ~~is almost straight~~ <sup>just ant. to me</sup>, swelling out slightly midway between anus & flukes. The lower surface of peduncle joins flukes ~~is~~ more gradually than does the upper.

(See other page for measurements.)



measurements of no. 20

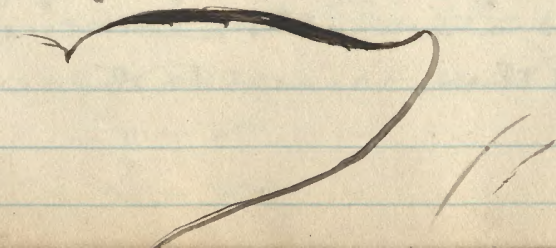
|       |         |        |        |        |      |
|-------|---------|--------|--------|--------|------|
| no. 1 | - 1215' | no. 18 | - 118  | no. 32 | - 40 |
| " 2   | - 230   | " 21   | - 240  | " 34   | - 4  |
| " 3   | - 220   | " 22   | - 175' |        |      |
| " 6   | - 355'  | " 24   | - 70   |        |      |
| " 7   | - 405'  | " 31   | - 200  |        |      |

no. 21 Gray Whale, ♂, Jan. 20/12 Munsan Korea  
 Dist. between each crementation on the dorsal ridge is about one foot - it varies, sometimes being a little more or a little less.

Furrows Two, each 170 long; the ant. ends are 20 cent. apart and the post. ends 50 cent.; the ant. ends of the furrows are 75 cent. from tip of lower jaw.

Flukes Upper surface has number of whitish circles and spots on distal half - post edge not white. Ant. edge regularly & slightly convex from the insertion becoming more convex toward the distal end.

Post. edge is from the notch is strongly convex becoming concave in the distal third. The tip is blunt - notch deep & open in this specimen but varies greatly



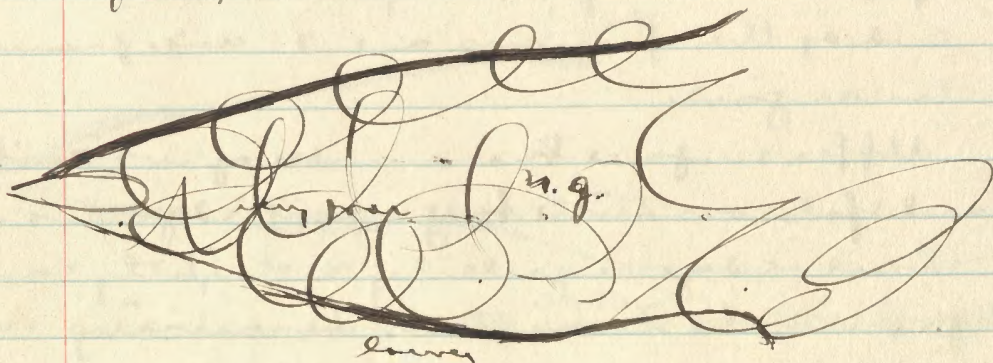


Baleen All yellowish white (bristles)

The ant. ends of baleen rows are 35 from tip of snout. Ant. ends ~~to~~ are 11 apart + post ends 44 - At the widest point the tips of the baleen plates as they stand in position are 65 apart

Peduncle

Just behind the annus there is a deep concavity in the anterior of lower surface of peduncle, which then swells outward gradually reaching its greater convexity just anterior to a point midway between the insertion of the flukes & the annus.



Blowholes

Blowholes situated in a depression just behind the highest point of the rostrum. They slant upward about like this — Just behind blowholes & opposite the posterior corner of the eye there is a depression in the outline of the head which then rises to the curve of the back.







- No. 23 Gray whale ♂ Jan. 24/12 Murean  
 A light whale - Head, lips, & jaws  
 mostly light gray with flecks of  
 white - much light gray on the  
 sides of the body in small patches  
 bars darker & flecks. Peduncle  
 with small light gray markings on  
 sides - dorsal surface plain - ventral  
 surface has a few ~~white~~ irregular  
 white lines like scratches.  
 2 furrows  
 9 creulations including hump.

|       |        |        |       |        |       |
|-------|--------|--------|-------|--------|-------|
| no. 1 | - 1235 | no. 15 | - 22  | no. 22 | - 170 |
| " 2   | - 225  | " 19   | - 80  | " 24   | - 95  |
| " 3   | - 210  | " 20   | - 150 | " 31   | - 200 |
| " 6   | - 365  | " 21   | - 235 | " 32   | - 42  |

Bristles of baleen are gray in past. half.  
 ant. half yellowish white

- No 24 Orca orca ♀ Feb. 1/12 Murean, Korea  
 Time was not given to get a detailed  
 description of the markings of this  
 whale but I examined it as carefully  
 as possible when being cut up and  
 could see no difference between it  
 & the Orca taken at Oshima. The  
 general pattern of the whale below  
 was the same, there was the white  
 spot behind the eye, and the large  
 gray patch just behind the dorsal.

8. 01  
 photos



in the stomach were a quantity of  
~~the~~ remains of crustaceans - the  
 carapace only - about 2" long. Also  
~~the~~ a small portion of baleen  
 from the distal end of the row from  
 a whale. Also some meat in the  
 stomach.

The dorsal was low and ~~shaped like~~  
~~this~~ the breadth of the base  
 was almost as great at the height

|      |                      |         |          |                |
|------|----------------------|---------|----------|----------------|
| no 1 | - 665                | 5 - 310 | 13 - 90  | 24 - 52        |
| 2    | - 75                 | 6 - 215 | 21 - 102 |                |
| 3    | (over curve)<br>- 82 | 9 - 230 | 22 - 70  | 14<br>blowhole |
| 4    | - 170                | 11 - 62 | 23 - 92  |                |

no 251 Onca area ♂ Feb. 1/12 Ulsan, Korea  
 in color like no. 24 - F in very high  
 + slender -

|      |       |                                |       |
|------|-------|--------------------------------|-------|
| no 1 | - 835 | no 16                          | - 85  |
| 2    | - 90  | " 21                           | - 200 |
| 4    | - 210 | " 22                           | - 146 |
| 6    | - 305 | " 24                           | - 110 |
| 7    | - 435 | notch of peduncle to penis 360 |       |
| 11   | - 160 | Length base of dorsal = 460(?) |       |
| 12   | - 270 |                                |       |
| 13   | - 150 |                                |       |

Skeleton taken, photos



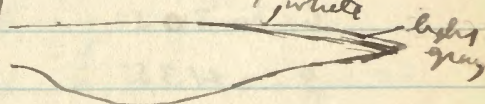
concentric white in dark  
 spots under fin on fold &  
 a line of white spots follows  
~~the~~ end of fin from  
 down ward.

no. 26

Blue Whale, ♀ Feb. 2/12 Ulsan, Korea  
 A light whale. Head and throat plain  
 dark gray, except that on side of head  
 a line of rather small of light gray mark-  
 ings came forward to half way between  
 eye & ear - from that point to eye is  
 a narrow band of light gray. Many  
 light gray markings on sides of body  
 from <sup>opposite</sup> ~~anterior~~ forward to fins & on back  
 clear to dorsal ridge; in some places  
 the light gray is in large patches  
 solid; much more light than dark  
 color. The gray markings ~~extend on~~  
 thickly cover the sides of the peduncle  
 almost to flukes but the ventral edge  
 is unmarked. F

Fins

Above plain dark gray, except at the  
 ventral end where the the white of the lower  
 half of anterior edge runs up on to upper  
 surface & becomes gray. Below pure white.

Parasites

The entire body & in a few places on  
 the head, is covered with oval scars  
 & deep oval pits, some partially healed,  
 & others containing a sort of granular  
 lining which may be pulled out; I have  
 seen the same thing on other Japan  
 specimens. The scars seem to be from



Penella. A fish ( ) parasitic  
on giant kelp

measurements of no. 26

|       |        |              |                  |
|-------|--------|--------------|------------------|
| no. 1 | - 2280 | no. 12 - 600 | no. 22 - 270     |
| 2     | - 535  | 13 - 320     | 24 - 100         |
| 6     | - 675  | 16 - 125     | 31 - 500         |
| 7     | - 545  | 20 - 220     | 32 - 115         |
| 10    | - 820  | 21 - 390     | eye opening = 10 |

Baleen horns inserted have the tips at the  
widest point 240 apart.

no. 24 Humpback, ♀, Feb. 12, 1/2 Muraan  
A very dark whale. Entire head, back  
breast belly, sides & peduncle black with  
no sign of white. On both upper  
& lower lips ~~there~~ are the dentate half  
there are a few white circles & a few on  
throat just below chin. (no white about nose)  
(or genitalia)

Fins Above all black with three or four white  
arcs. Below all white.

Flukes Above black; Below, the proximal portions  
of each lobe & the ant. & post. edges are  
black; remainder white.

Breast fold stretches apart 10"

|              |              |                          |
|--------------|--------------|--------------------------|
| no. 1 - 1130 | no. 16 - 114 | no. 24 - 100             |
| 2 - 295      | 19 - 85      | 31 - 260                 |
| 6 - 310      | 21 - 403     | 32 - 65                  |
| 7 - 395      | 22 - 328     | genitalia & breast = 185 |
| 12 - 420     | 23 - 365     |                          |



Skeleton Taken

- no 28, Humpback, ♂, Feb; 13/12 Alaskan  
 Head, back, ~~throat~~, belly, sides of body  
 + entire peduncle black. Breast <sup>pharynx</sup> ~~base~~ have  
 only a very few small white edgings to the  
 folds. A few white excres on ramini  
 & lips in central half. (This whale was  
 much like no. 22) Some white <sup>possibly</sup> ~~basal~~ ~~several~~  
 Fins Black above - Below white, except for  
 a narrow margin of black & a small  
 basal patch of black.  
 Flukes Above & below black - just a light wash  
 of white on the right fluke above.  
 Baleen Bristles all dark gray to port. half.  
 and half has the bases & tips dark gray  
 & a whitish central band. Mucous  
 memb. of mouth roof / very light flesh.

no 1 - 1475      no 16 - 122

2 - 357      20 - 200

3 - 285      21 - 455

4 - 565      24 - 120

5 - 495      31 - 340

6 - 362      32 - 70

anus & penis: 125

11 - <sup>26</sup> ~~122~~

12 - 490



contained a foetus no 29a

no 29 Humpback ♀ Feb. 13/12 Brown  
Head, back sides belly & peduncle  
black. Breast & throat with many  
circles & dashes of white, especially  
in the folds. Pinnal tips with but  
few white circles.

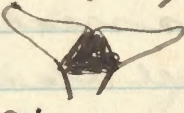
Fins Above all black with only a few white  
circles near tips - Below all white  
except for a very narrow edging of  
black & a small basal patch.

Flukes Above all black. Below black with  
considerable white in washes on distal  
half of both lobes.

Faint tubercles on tip of right ramus just  
beside symphysis each having a hair  
Tubercles are 2 inches high.

|             |             |             |
|-------------|-------------|-------------|
| no 1 - 1426 | no 12 - 480 | no 21 - 444 |
| 2 - 360     | 13 - 288    | 22 - 352    |
| 3 - 275     | 16 - 128    | 23 - 410    |
| 4 - 505     | 19 - 98     | 24 - 112    |
| 6 - 335     | 20 - 168    |             |



- no 29a Humpback foetus ♀ from no 29  
 Body slate color - lower edge of peduncle  
 whitish & a patch at genitalia. Entire  
 throat whitish; at fins a lighter gray  
 band comes across breast & behind  
 this band the breast folds have washes  
 of light gray & whitish. whitish band from  
 eye & ear  
 Fins Below all white - above slate  
 Fleshes Below have all except pectoral portions  
 of lobes whitish  crenulated posterior  
 edge.  
 Dorsal also tipped with white  
 Tubercles 13 on left ramus counting the cluster  
 of 5 beside symphysis.  
 Every tubercle on head & jaws bears a  
 hair

| no. 1             | <u>cent.</u><br>495 | no 14-86 |
|-------------------|---------------------|----------|
| 2                 | -105                | 16-45    |
| 3                 | -75                 | 17-5     |
| 4                 | -180                | 18-15    |
| 5                 | -326                | 19-38    |
| 6                 | -126                | 20-59    |
| 7                 | -179                | 21-145   |
| 8                 | -310                | 22-118   |
| no 14 to hard 206 |                     | 23-144   |
| 11                | -9                  | 24-35    |
| 12                | -170                | 25-26    |
| 13                | -85                 | 27-6     |
|                   |                     | 32-5     |
|                   |                     | 34-26    |

Circum. of body at widest 760



no 30

Finbock ~~♂~~ Feb. 24/12, Uruan, Kawa

A rather light whale. Gray comes down low on peduncle ~~leaving~~ leaving only a narrow ventral stripe of white. The two gray "prongs" running forward to arms are well marked. 12 furrows are dark on the left side, but at a point halfway between mouth & fin. Usual light markings from eye to ear. White portion of baleen is 25 long.

" Elg. of snout beside it is 104 long. Flukes <sup>below</sup> white in <sup>center</sup> ~~center~~ lined with gray in its distal half - above all scall.

no 1 - 1570

no 21 - 209

Eye opening = 9

2 - 330

22 - 138

Ear " = 5

3 - 300

24 - 50

7 - 415

25 - ??

11 - 45

26 - 8

12 - 350

31 - 335

13 - 197

32 - 70

14 - 197







































## Sei whale

when feeding sei whale sometimes "skries"  
along the top of the water with the mouth  
open & does not turn on the side as do  
the others

4 or 5 traveling in front then 50-60  
following

Same speed but - do not change  
water as whales it is the best if you  
and change speed.

Sei whale taken Feb/12 sold as follows  
 Red meat sold for 11 per lb. } very high for  
 Blubber " 6 " " " } no fish



Dear Mother

I am feeling very well and hope you are the same. I am writing you a few lines to let you know how I am getting on.

I am still in the hospital and hope to be home soon. I am feeling much better now than I was when I first came here.

I am still in the hospital and hope to be home soon. I am feeling much better now than I was when I first came here.

I am still in the hospital and hope to be home soon. I am feeling much better now than I was when I first came here.

I am still in the hospital and hope to be home soon. I am feeling much better now than I was when I first came here.

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## Blue Whale

Down  
50 min.

In Hudson Capt. Nelson killed a Blue whale that was down for 50 min. the first time ~~the whale was down~~ & when it came up spouted 20 times; the second time it was under 40 minutes (time by clock). Usually ~~at~~ they are down 15 to 20 minutes

Usually  
15 to 20 min.

Capt Nelson says that it is by no means always possible to tell the spout of a Blue whale from that of a Finback. ~~He~~ but frequently he can do so because the spout of the former looks whiter than that of the latter. It depends upon the clearness of the air etc. Blue whale spouts ~~at least~~ <sup>nearly</sup> as high as a Finback

Noise  
spout

Blue whales make a tremendous noise when they spout. The tone is about same as that of Finback but much louder generally. If there is a calm sea & a fog the noise of a Blue whale's spout could be heard 3 or 4 miles.

Number  
spouts

Under ordinary circumstances Blue whales spout from 8 to 15 times at a rising

Generally

Shot a Blue whale at 5 A.M. & towed the ship ~~at right~~ engines full speed astern until 11 P.M. — then took ahead about 6 mile and ~~at~~ at 11 P.M. slow down & kept speed, & at 1 A.M.



1

to star spent + kill at 2 P.M.

Price of Blue whale caught Jan 28/12 as follows

Red meat sold for 13 sen per lb.

Blubber " " 6 " " "



## Finbacks

Codfish

In Kana Capt. Melsum has several times found Finbacks full of Codfish 16" to 18" long. A Sampan load was taken out of one whale and the men at the station & on his ship had them to eat.

Opening  
& shutting  
mouth

One time Melsum shot a Finback which <sup>just whirling</sup> swam along the top of the water with the back bent upward and the forepart of the body & head out of the water; it was continually opening & shutting its mouth with a snap which could be heard for a long distance.

Spout  
under  
water

When a Finback is feeding and has just turned on his side taking in a mouthful of food if he becomes frightened by the ship he will sometimes spout under water (several feet). Then no spout is seen only a lot of bubbles & a boiling of the water, ~~when~~ it can of course only let the water out of its lungs & not take any in. If the blowholes are even a few inches under water the spout is low & irregular; if a foot or more down no spout is seen only a disturbance of the water.

Regular  
whale

Finbacks are most regular of all whales in



~~On~~ their movements. If <sup>eye</sup> it is travelling it will swim as straight as an arrow not varying a quarter of a point from its course; if it is down 20 min. it will generally keep to that time. When feeding of course it is different.

Furberks are found feeding in the Japan sea. In 1912 the first one taken was on Feb. 7/12

Capt Nelson found a 50 Furberk which was nearly dead - tongue eaten out, fins half gone & great pain from back & belly.

Another time ~~that~~ the intestines & other parts of whales were floating on the surface & lots of killers showed when Nelson heard some of the Orcas they drew up much meat & were taking long sniffs

Sometimes Furberks & Orcas swim side by side no trouble at all not scared - other times wild

Furberk Feb 19/12 sold as follows

Red meat sold for 10 sen per lb

Blubber " " 6 " " "







## Right whale &amp; Bowhead

On Feb. 10 a Right whale was killed at  
Hosbashiwa Japan

Right  
spout

~~But~~ Right whale has a very ~~long~~ thin  
divided spout - divides right from the  
bottom  & not this way  as Melles  
& others have shown - it is about 15 ft high

spout

Bowhead has but very little spout - Nelson  
One Bowhead which Nelson hunted stopped  
below a very long time & made only one  
spout; then it kept coming up quicker  
& quicker, & spouting very often.

Spout of  
Bowhead

On Trip aprehewen Nelson thinks  
it went about 8 miles per hour.

A good many Bowheads in a little  
sea - Nelson saw 20 in one day 1900



(cont. from page 193)

Both Capt. Johnson & Hurm confirmed Capt. Melons statement that the killers put their noses against the lips of the gray whale and force the mouth open to get at the tongue. The gray whales are so terrified as soon as a killer appears that generally they turn over on their backs, belly up, ~~and~~ with fins spread out and lie quiet. Capt. Johnson shot one in the breast while lying in this position. The day that Capt. Hurm on the "Olga Mann" lost in three whales he got them with the aid of the killers. There were fifteen or eighteen killers about the gray whales which were paralyzed with fright. Two of ~~these~~ the three whales had the tongue badly bitten & "cheered"

Speed of  
Gray Whales

The gray whales can not reach a greater speed than 7 or 8 knots even when badly frightened; can never go as fast as the ship. Ordinarily when "travelling" & not frightened they go at about three or four knots.

When there is a school of gray whales, say seven or eight, and two or three ships are hunting them they can be "scared up" i. e. they become so badly frightened that they



will not dive but plough along at the surface.

spout  
+  
✓

The spout is somewhat like that of a Humpback i.e. low & "bushy". It seldom rises to as great a height as a that of a Humpback but may upon occasions. Generally it goes up seven or eight feet. Capt. Melson says that sometimes when he has been directly before or behind a Gray whale that the column is divided <sup>about 1 in 40 whales</sup> but this is very seldom; generally no divisions can be detected. The number of times that the animal spouts at a rising series to be as variable as with other whales. They may blow <sup>two</sup> ~~at~~ <sup>three</sup> ~~times~~ while plowing along near the surface, or come up, spout once & go down.

✓  
number  
of  
spouts

Capt. Melson told me that one day he was chasing a Gray whale in a perfectly smooth sea; the animal went down and was under about fifteen minutes. Finally they ~~had~~ heard a slight sound near the ship and saw a light cloud of vapor floating away over a sort of riffer. The whale had just poked his blowholes up, spouted very quietly and <sup>gone</sup> ~~down~~ down again for ten or



twelve minutes. They will do this often when being chased; simply show its blowhole, spout quietly, and sink without showing more of the body. At other times ~~when~~ they may raise themselves out of the water, resole ~~round~~ much like a humpback and draw the flukes out.

The height and density of the spout depends entirely upon circumstances apparently. Sometimes when they have been under for ten or twelve minutes they will blow so quietly and ~~evenly~~ in such a way that hardly any vapour cloud is formed at all.

✓  
Breaching

These whales seldom throw themselves out of the water or "breach" as do the humpbacks; Capt Johnson saw two do it however. Capt Wilson says he has seen a number <sup>do it</sup>.

✓  
Frightfully  
Qualities

There seems to be little ground for the alleged bad "disposition" of this whale; at least from the experience of the whalers here. It is however a dangerous whale to lance. Apparently it is rather sensitive and as soon as the lance touches it will rear up in the water throwing its head from side to side; sometimes also it will thrash about with its flukes & fins when the lance pricks. Capt Wilson does not think that the whale



at this time is trying to kill its enemies but simply to rid itself of the pickering lances. Because of this habit they do not often send a boat out to kill a wounded whale but haul it in under the bow for a second harpoon.

✓  
where Killers  
come whales  
beat for shore.

As soon as the Killers begin to come around the Gray whales will head for shore getting in as close as possible.

✓  
Point  
leave of

Frequently they will lie in the surf in only one or one and one half fathoms of water rolling about in the breakers; this is apparently play.

Capt. Melson says the ♂ Gray whale always shows considerable affection for the ♀.

One day there were two Devil fish together at Unsan and he killed the female. The male swam alongside and put his head on the other's back. As soon as the gun was loaded he hit the ♂ with a harpoon but did not get fast; it swam off but soon returned and he finally killed it. I have never seen calf Devil fish with their mothers (as at all) & so could not say as to the affection.

✓  
Devil fish  
hit boat

In 1911 Melson was hunting a shoal of Devil fish ~~in~~ with other ships - they were so frightened that they were running



on top of the water - killers came and chased me out to one side. This one came <sup>straight</sup> up with his whole head out of water & was then so bewildered that it ran squarely into the ship - nothing was injured.

Spent 5  
movements

Devilfish are the most irregular in their movements of all whales. The spout will vary from absolutely nothing to a column 15 ft high & almost as big as a humpback.

One day Capt. Nelson saw a bunch of killers ~~about fifteen~~ and <sup>later when about</sup> ~~about fifteen~~ miles away killed a whale. He had not seen a killer since the school fifteen miles away but in a very short time he saw the high fins in the distance and the killers came for his whale as straight as an arrow.

Whether or not they were the first school he saw he could not tell. They came alongside and at once tried to get at the tongue of his dead whale, but put up their snouts against its mouth & by putting on full speed with their tails force the mouth open. One of them snatched in the rear of the ship by it with his flukes. He shot one in the head with his six mm. Krag rifle and killed it at once.



✓ Females when have young on or ~~the~~ for  
that always float

✓ Single whale or two never change speed  
of engine - no dips, whether slow  
or half but never change

a ~~lot~~ more spin than whales  
has - circle in ~~some~~ but  
never change

✓ Hear pupplet if change speed or  
position

✓ 9th & 10th Bay Kona end of apr  
may remain for a long time  
probably feeding there.

Buried  
some































Humpback 4 1/2' 7" ~~Dist~~ Feb 13/12

soed as follows

Red weed no 1 at 12 sen per lb.

" " " 2 " 10 " " "

Blubber - - - - - 6 " " "

Breast folds - - - - - 5 " " "



In Korea at Chusan Capt. Melson says that for years Humpbacks were always seen about the first of April and few if any during the winter. But for the last seven years not one has been seen in April but they are sometimes seen in Jan & Feb. They are always passing south & not feeding.

A Right Whale 50' long taken at  
Hososhima, <sup>during Feb. 1912</sup> weighed as follows

|          |   |                                             |
|----------|---|---------------------------------------------|
| Red meat | — | 38,060 lbs                                  |
| Blubber  | — | 27,457                                      |
| Heart    | — | 1,669                                       |
| Tongue   | — | 3,348                                       |
| Tail     | — | 1,983                                       |
| Fins (2) | — | 1,585 blubber only                          |
|          |   | <u>74,052 lbs = 37 tons</u>                 |
|          |   | add <sup>for bones</sup> <del>blubber</del> |
|          |   | " " blood <u>5 1/2 "</u>                    |

Red meat of Right whale not so good  $4\frac{1}{4}$  per cwt as that of Blue or Finback whales, but the blubber is best of all whales for eating. During Feb. 1912 the meat of a Right whale ~~was~~ sold for <sup>12</sup> ~~10~~ sen (6¢) per lb. The blubber sold for  $8\frac{1}{2}$  sen per lb ( $4\frac{1}{4}$ ¢)



Bottlenose  
Whales

In 1910 Capt. Fred Olson told me that he saw some Bottlenose whales off Aikawa but that they saw so fast he could not get a shot.

Capt. Melson says that last summer (1911) he saw Bottlenose off the coast 120 miles north of Aikawa. Also said they saw so fast he could not get a shot.

Black  
Killers

All the whaling Capt's. to whom I have spoken said they have never seen a killer that was all black or that did not have the white underparts of Orca orca. There are great numbers of killers in the Japan Sea - the whalers see them every day.

Parasitic  
Fish

Capt. Hurum and Melson say that the fish Penniligia antroaeis (Bouvier) is the same as the one I found on the Blue Whale are sometimes seen on Finbacks & frequently on Sei Whales. Hurum took one Sei whale at Aikawa in 1911, that had about 20 on it. The sucking disk of one of them about 3 ft long Mr. Kudo preserved & showed me.

All whales according to Capt. Melson if the ship touches them get so frightened that they don't know what to do & even forget to go down.



B. glaucusAlmost  
plates

B. glaucus is a very easy whale to raise  
to the surface since it will almost float  
of its own accord; (re. offspring of B. h. whale)

Balien  
plates are  
apart

The distance between balien plates varied  
in different whales from 10 in. to 5 in.  
Bristles are very coarse & stiff.

Teeth  
Roof of  
mouth

Teeth of male 38' long was 27" long  
The mucous membrane in the roof  
of the mouth is usually white, but  
sometimes very light pink.

Cyamus

Cyamus infest the tips & posterior  
edges of the flukes & flippers, the anus,  
& genitalia, & particularly the blowhole.  
There are generally many patches of  
these parasites on the rostrum and  
in two or three spots just behind the  
blowhole on top of the head. Any wound  
is usually attacked by them at once.

Capt. Johnson says he has never seen  
any evidences of the reputed evil  
disposition of the Gray whale. He says  
they are very timid and will run  
even from a fishing boat.

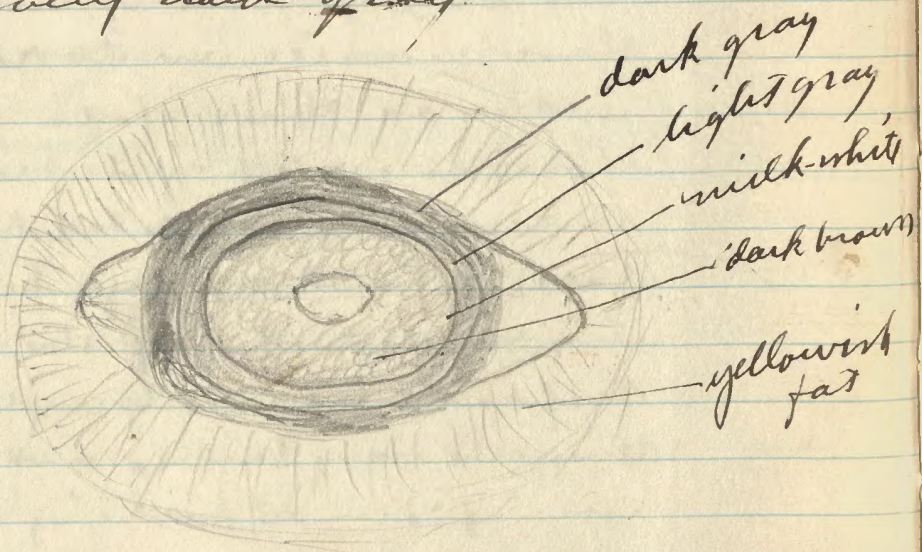


Eye of  
Rachian  
etes  
glauus

Eyeball from a full grown male 38 feet long has a circumference of 205 mil. after it has been trimmed of fat. The iris is ~~mid~~ 26 mil long & 17 mil. in diameter. The pupil is 10 mil long and 6 mil in diameter. The pupil is egg-shaped the upper side being somewhat flattened.

The iris is a clear dark brown & is ~~about~~ a band ~~at~~ 6 mil broad.

~~The~~ ~~encircling~~ The outer edge of the iris is shaded <sup>too narrow</sup> ~~with~~ a milky-white ring. Encircling the iris is a band of light gray four mil. in width which shades off gradually into very dark gray.





## Gray Whale Habits

Southern Capt. Melson says that ~~the~~ about the  
 middle or end of November the Gray  
 whales begin to appear at Umanai. They  
 are all going south and <sup>they are</sup> ~~about~~ <sup>with</sup> ~~all~~.  
<sup>♂ & ♀ not</sup> ~~of the~~ <sup>♂ & ♀</sup> have large foetuses. Later the  
 males appear in numbers and but  
 few females are taken. (When the  
 females begin to come <sup>they outnumber</sup> ~~a few~~ <sup>the males</sup> ~~they~~  
~~males are with them~~ ~~there is no~~  
 young ones are with the females  
 when they are going south and  
 and ~~has~~ ~~and~~ they are all travelling  
 steadily and are so heavy with young  
 that they can be easily killed. They  
 probably have their calves <sup>near the S. coast</sup> ~~in the sea~~  
<sup>End of the Korean Peninsula</sup>  
~~the~~ ~~off~~ ~~the~~ ~~sea~~, for they are almost  
 ready to be born when they are here.

These whales apparently come from  
 the Okotsk Sea where they spend the  
 summer. Capt Melson has seen  
 them there in great numbers in  
 the summer & says they are never  
 travelling when ~~up~~ there. After the  
 females, come the males which also  
 travel steadily southward. The  
 south migration is finished about  
 middle of January at Umanai  
 so that the whales have taken about  
 2 months to pass.



Northward ~~movements~~ <sup>March</sup> About the middle of ~~May~~ the Gray  
 whales appear off Umanau again &  
 are <sup>then</sup> all going northward. At these  
 times calves are with the females.  
 The northward migration lasts  
 for about two months, the whales  
 all having passed Umanau by  
 the middle of May.

Evidently, the Gray whales are  
 more regular both in time of  
 breeding and in migration than  
 are other whales.

Animals  
<sup>not</sup>  
 feeding

When ~~first~~ seen at Umanau both  
 on the northward & southward  
 migration's Capt. Melson says  
 that the animals are apparently  
 not feeding; that they are travelling  
 steadily at about 3 or four knots  
 per hour. They keep in close to the  
 shore, sometimes almost on the rocks,  
 so close in fact that many times  
 the ship could not follow them.

They do not raise themselves high  
 out of the water and every one says  
 they are very "cute"; sometimes they  
 will come up to blow showing  
 only the blow hole and a few inches  
 of the head near it, keeping the  
 back entirely under. They usually



travell in two or three but often singly;  
frequently also schools of six or seven  
or more will ~~show~~ appear.

Attacked  
by  
Killers

Several whales were hurt in at the station  
with their tongues at the tips bitten &  
eaten away. There were unmistakable  
marks of teeth and in ~~some~~ several  
instances bites had been taken out  
of the lips. It was seen this was the  
work of killers & asked Capt. Melson  
about it. He said that without  
doubt it was so. The killers appar-  
ently cause these whales a great  
deal of trouble and frighten them  
greatly when ever they appear. Capt.  
Melson says he sees the killers after  
gray whales very frequently and that  
the whales are almost helpless from  
fright. The killers will put their noses  
against the lips of the whale, put on "full  
speed" with their tails and try to force  
open the mouth of the animal. I  
should have been inclined to doubt  
this but after seeing the tongues  
eaten as I have, the story seems prob-  
able. Evidently the killers got at the  
tongue in some way and it is not  
likely that the whales would open their  
mouths if they could help it. The



2 soie dem - is is easy  
 Kederred = but  
~~Ekubur~~ Ekubur - stomach  
 Kango = live

hakaraman - to take a measure

Orcas probably kill some whales &  
 can get at the tongues than but that  
 the tongues had eaten partly away & the  
 animal lived to be killed by the whales  
 was shown by the four specimens  
 brot'in. One of them had at least  
 half the tongue eaten and the other  
 three just ~~the~~ the tips for about  
 a circle of about 1 1/2" diameter. The  
 posterior ~~at~~ edges of the flukes &  
 flippers are almost always irregular  
 & show signs of injury as do the  
 tips of both. I have no doubt but  
 that in most cases this is the  
 work of killers. Indeed two whales  
 showed very plainly the teeth marks  
 where the fin had been "shredded" &  
 the whale pulled it out of the killer's  
 mouth. Capt. Milson says that  
 when he is following a school  
 of Gray whales frequently a bunch  
 of killers will begin chasing them  
 also. The whales are then so frightened  
 that usually several can be killed.  
 He shot a killer with his rifle that was  
 biting away at a Gray whale's body  
 which was <sup>turning</sup> along side the ship.

Food

I have asked several gunners if they  
 knew what the Gray whales eat. All



said "no"! Capt. Melson tho't that per-  
 haps it was jelly fish. This is exactly  
 my own idea. I have examined  
 very carefully the stomachs of several  
 whales which were bro't in. All were  
 more or less filled with ~~green~~ olive green  
 water in which the only solid material  
 were bits of ~~floating~~ kelp, a little  
 sea weed, and a few ~~the~~ water-worn  
 pebbles. There were small masses  
 of <sup>light green</sup> gelatinous material and in the  
~~stomach of one whale~~ (which contained  
 little water) there was in the folds of  
 the stomach a considerable amount  
 of whitish gelatinous material; this  
 looked much like partly digested  
 jelly fish. This same whale also  
 had several masses six or eight  
 inches long of what looked like  
 raw beef which had been shredded  
 finely but still hung together by the  
 fibres; it was certainly not  
 fish, and did not look like jelly  
 fish. The excrement of all the  
 whales is about the consistency  
 of very thick cream and is ~~olive~~  
 green in color.

(continued on page 175)



number of Boreen plates of R. glaucus  
The following figures are the number of  
plates on one side and on all from dif-  
ferent specimens; I began to count with  
the first "bustle" which was more than  
 $\frac{1}{8}$ " wide & 2" long

164 168 154 158 w 16-162

160 174 138 148

Jaws of  
Blue whale

When cleared of flesh the two jaw  
bones weighed 3066 lbs.

Jan 16/12

A whale hunt on this morning. Of which  
I did not measure. Had three throat

Strength  
of  
Blue whale

furrows - the center one fully developed  
Capt. Nelson says that one day <sup>on Delaware coast</sup> he struck  
a blue whale which took over 500 fathoms  
of line and towed the ship with engine  
at full speed astern, forward ~~for~~ for seven  
hours at not less than eight knots at  
any time.

Finback  
speed

Capt. Nelson thinks that the Finback  
generally swims at about 10 knots  
when travelling & not scared but when  
frightened are easily capable of 30 knots  
an hour, or more perhaps.

Height  
of fin

He confirms my opinion that "Heaps"  
spout runs to about 15 feet ~~for~~ as  
a maximum.



## Formalin preparations

- no 1 Section showing hair from tip of snout  
 2 " " " " mandibular symphysis  
 3 " from lumps ~~at~~ near prenasal end of lobe  
 4 " " testes about  $\frac{2}{3}$  way toward distal end  
 and of ~~each~~ side of testes  
 5 Eye from R. glauca  
 6 Corrupted layer of skin off side of snout  
 7 Barnacles from Humpback taken at Uman Nov. 1911  
 10 Heart } Gray whale  
 11 Stomach }  
 12 Barnacle }  
 13 Eye of Humpback no. 27 ♀  
 14 Hairs from mandibular symphysis of Foetus no 30  
 Ke. s. mounted

June 18 Gray whale ♂'s 42'-41'-38' did not measure.  
 Melson killed one Gray whale ♀ 49 ft long  
 & one ♀ 47, the largest he has ever killed or  
 seen

Aosaki = blubber red  
 Shiroaki = " white } kinds of gray whale that  
 Japanese recognize  
 Kokujira = Koku kujira

B. davidsoni

Capt Melson tells me that he has seen  
 many B. davidsoni in the Japan Sea in  
~~summer~~ winter near Gensen, in Brought  
 on Bay, Korea, & a few in the sea in  
 summer, never anywhere else.







Finback = nagasu kujira =  
 Blue = shironagasu "  
 Humpback = Gato "  
 Sei = Oiwashi " = Sardinia whale  
 Right = Semi "  
 Bowhead = Hokkyoku " = North Pole whale  
 Killer = Shijishi or Takamatsu  
 Gray whale = Koku kujira  
Berardius = Tsuchi kujira



If we write to  
 Dr. Allen  
 within 2  
 Person  
 edit  
 Syn  
 Capt.  
 Miller  
 Caraly

10 miles  
 grass  
~~type~~  
 Van  
 Dick  
~~at~~  
~~wood~~  
~~wood~~  
~~filled~~  
~~water~~  
~~filled~~  
~~kernel~~

E. J. Kitson

Gray whale worth about 1000 yen or \$500  
 of  
 Humpback " " 4 or 5000 yen, red

17

amari suke-sai ika ni yo.

Perniligia australis



Tonsberg, in Christiania Bay, about forty miles from Christiania, is the town from which most of the gunners come.

Herr. G. Melson.  
of main  
Kristiania

~~Shingabo~~  
shigabo  
gogo  
gogen

Chosenjin  
Korean

Harpoon has four flukes - flukes long  
it is 6'4" long including bomb

Harpoon line is usually 4" or 5" - fairer is very fine  
+ tested to 15 tons

Herr. Hentrichsen  
Tonsberg for small harpoon-gun

same harpoon line 28 tons testing - usually  
for fairer usually about 15 or 16 tons &  
for line 14 or 19 line is of d. t. in temp  
fairer about 300 fathoms

Harpoon gun is 131 cent. long; the dia-  
meter of the butt is 33 cm & near the  
muzzle 28 cent. Bore 75 mil or 3"

500  
3000

600  
3600



