

whatever of this habit of the catfish. If the observation is new, and it deserves to be placed on record, you are at liberty to use this in any way you may deem proper.

Very respectfully,

N. T. LUPTON.

**ON THE OCCURRENCE OF *STICHAUS PUNCTATUS*, (FABR.) KRÖYER,
AT ST. MICHAEL'S, ALASKA.**

By TABLETON H. BEAN.

A single specimen of the species above named was collected June 29, 1874, at St. Michael's, Alaska, by Mr. Lucien M. Turner, who sent it to the United States National Museum. The species is now apparently for the first time recorded from the coast of Northwestern North America. The total length of the specimen is 145 millimetres ($5\frac{11}{16}$ inches). It has been compared with an individual of the same species from Greenland (probably from the Danish Colonies, as it was presented to the Museum by the Danish Academy), and another from Halifax, Nova Scotia, where it was taken September 4, 1877, by the United States Fish Commission, at the mouth of the harbor, in 20 fathoms of water. In order to show at a glance how the St. Michael's specimen differs from the other two, the proportions of the different parts of the body of all the specimens to the total length without caudal are exhibited in tabular form. The average proportions of the three individuals are given in another table, and they may serve as a basis of a description of the species. From this average the specimen from St. Michael's differs in the following particulars:

1. The maxillary is longer.
2. The mandible is longer.
3. The pectoral is longer.
4. The ventral is inserted somewhat nearer the snout.

In the number of anal rays, the Alaska specimen is intermediate between the other two. The differences indicated fall within the limits of individual variation, and in the absence of sufficient material it is not practicable to separate the St. Michael's example from the other two, even as a variety.

Stichæus punctatus is recorded from the coast of Greenland (Danish Colonies?), Newfoundland, Halifax, Nova Scotia, and St. Michael's, Alaska.

Table of Measurements.

Current number of specimen.....	21,718.		4,588.		21,068.	
Locality.....	St. Michael's, Alaska.		Greenland.		Halifax.	
	Milli- metres.	100ths of length.	Milli- metres.	100ths of length.	Milli- metres.	100ths of length.
Extreme length (without caudal).....	125		101		160	
Length to end of middle caudal rays.....	145	(5 $\frac{11}{16}$ in.)	117		182	
Body:						
Greatest height.....		17		13		16 $\frac{1}{2}$
Height at ventrals.....		12		12		13
Least height of tail.....		7		7		6
Head:						
Greatest length.....		22		21		22
Greatest width.....		10		10		9 $\frac{1}{2}$
Width of interorbital area.....		2 $\frac{3}{4}$		2 $\frac{1}{2}$		2
Length of snout.....		6		5 $\frac{3}{4}$		6
Length of upper jaw.....		8		6 $\frac{1}{2}$		7
Length of mandible.....		10		8 $\frac{1}{2}$		9
Distance from snout to centre of orbit.....		8		7 $\frac{1}{2}$		7 $\frac{1}{2}$
Diameter of orbit.....		5		5		4 $\frac{1}{2}$
Dorsal:						
Distance from snout.....		21		22		20 $\frac{1}{2}$
Length of base.....		78		80		80
Anal:						
Distance from snout.....		45 $\frac{1}{2}$		46		47
Length of base.....		54		55		54
Caudal:						
Length of middle rays.....		16		15 $\frac{1}{2}$		14
Pectoral:						
Distance from snout.....		21 $\frac{1}{2}$		22 $\frac{1}{2}$		22 $\frac{1}{2}$
Length.....		18		16		16 $\frac{1}{2}$
Ventral:						
Distance from snout.....		19		21		23
Length.....		7 $\frac{1}{2}$		8		6 $\frac{1}{2}$
Branchiostegals.....	VI		VI		VI	
Dorsal.....	48		50		48	
Anal.....	35		37		33	
Caudal.....	21		22			
Pectoral.....	15		15		15	
Ventral.....	3		3		3	

Table of Proportions.

Number of specimen.....	4,588.	21,718.	21,068.
Locality.....	Greenland.	St. Michael's.	Halifax.
Length of head in total length without caudal (times).....	4.76	4.55	4.55
Interorbital area in total length without caudal (times).....	.40	.40	.50
Snout in total length without caudal (times).....	17.65	16.67	16.67
Upper jaw in total length without caudal (times).....	15.38	12.50	14.29
Mandible in total length without caudal (times).....	.12	.10	.11
Distance of dorsal from snout in total length without caudal (times).....	4.55	4.76	4.88
Base of dorsal in total length without caudal (times).....	1.25	1.28	1.25
Distance of anal from snout in total length without caudal (times).....	2.17	2.20	2.13
Base of anal in total length without caudal (times).....	1.82	1.85	1.85
Distance of pectoral from snout in total length without caudal (times).....	4.44	4.65	4.44
Length of pectoral in total length without caudal (times).....	6.25	5.55	6.06
Distance of ventral from snout in total length without caudal (times).....	4.76	5.26	4.35
Length of ventral in total length without caudal (times).....	12.50	13.33	15.38
Branchiostegals.....	VI	VI	VI
Dorsal rays.....	50	48	48
Anal rays.....	37	35	33
Caudal rays.....	22	21	Imperfect.
Pectoral rays.....	15	15	15
Ventral rays.....	3	3	3

AVERAGE OF THE SPECIMENS.

Length of head in total length without caudal (times)	4.62
Interorbital area in total length without caudal (times).....	43
Snout in total length without caudal (times).....	17
Upper jaw in total length without caudal (times).....	14.05
Mandible in total length without caudal (times).....	11
Distance of dorsal from snout in total length without caudal (times).....	4.73
Base of dorsal in total length without caudal (times).....	1.26
Distance of anal from snout in total length without caudal (times).....	2.17
Base of anal in total length without caudal (times)	1.84
Distance of pectoral from snout in total length without caudal (times).....	4.51
Length of pectoral in total length without caudal (times).....	5.95
Distance of ventral from snout in total length without caudal (times).....	4.79
Length of ventral in total length without caudal (times).....	13.74
Branchiostegals	VI
Dorsal rays	48-50
Anal rays	33-37
Caudal rays.....	21-22
Pectoral rays.....	15
Ventral rays	3

U. S. NATIONAL MUSEUM, Washington, December 4, 1878.

REPORT ON THE LIMPETS AND CHITONS OF THE ALASKAN AND ARCTIC REGIONS, WITH DESCRIPTIONS OF GENERA AND SPECIES BELIEVED TO BE NEW.

By W. H. DALL.

The following report has been drawn up chiefly from material collected in Alaska from 1865 to 1874 inclusive, but includes references to the few Arctic or northern species which are not common to Alaskan waters.

The northwest coast of America, which I have already stated I have reason to think is the original center of distribution for the group of *Docoglossa*, at least of the littoral forms, is unquestionably the richest field where these animals may be found. This is true not only in regard to the number of species, but also in regard to the number of peculiar and remarkable forms of genera and subgenera; in one sense, the development and specialization of the soft parts, even at the expense of the shelly envelope, is a test of relative rank in restricted groups. Hence it may not be erroneous to regard the gigantic *Cryptochiton* as representing the highest development of the group, though belonging in the section of Irregular Chitons; especially as paleontological evidence shows part of the section of Regular Chitons to represent the Chitons of paleozoic times and embryonic structure. As was pointed out in my previous paper on the phylogeny of the *Docoglossa*, the embryonic types, represented by *Lepeta* and *Cryptobranchia* among the Limpets, are represented on the N. W. coast by a larger number of species and by larger individuals than in any other region; so the embryonic types of *Chitonidae* in the same district are here to be found more largely repre-