

ON THE *BRANCHIOSTOMA* [AMPHIOXUS] OF THE COAST OF SÃO PAULO.

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Several specimens of *Amphioxus* have been caught on 1938 in the bay of Santos and identified as *Branchiostoma caribæum* SUNDEVALL, 1853, according to the references given by HUBBS (1922).

During our investigation of different parts of the seashore region of this State, many of these animals were obtained, chiefly at the Ilhabela in the island of São Sebastião, an island on the north of São Paulo, 100 Km east and 200 Km west of Santos. In the same place, LÜDERWALDT (1929, p.40) captured many of these Lancelets which were identified by Dr. MIRANDA RIBEIRO also as *B. caribæum*.

In a recent book on the Fishes of the Western North Atlantic, edited by TEE-VAN, BREDER, HILDEBRAND, PARR and SCHROEDER (1948) the Lancelets have been dealt with by BIGELOW & FARFANTE. These authors mention that (p.17): "it seems probable that the Lancelets that have been recorded as *B. caribæum* from Santos, from Santa Catharina, at the mouth of the Amazon, from the Rio de La Plata and from Buenos Aires, were *B. platæ*" Based upon this, the authors have recorded our Lancelets under the name of *B. platæ* HUBBS, 1922.

To make certain whether the several specimens we have collected from Santos and from the Island of São Sebastião belonged in fact to *B. platæ*, or to *B. caribæum* as we recorded in our paper of 1938, we re-examined all the specimens from our collection; 13 from the Bay of Santos and 278 from the Ilha de São Sebastião.

BIGELOW & FARFANTE (l.c., p.16) pointed out that *B. platæ* differs from the two eastern Atlantic species of this genus (*lancoelatum*, *africæ*) and from *caribæum* as well, in having its anus considerably posterior to the midpoint of the lower lobe of its caudal fin. And they added that it differs further from *caribæum* in that the lower lobe of its caudal fin originates considerably anterior to the origin of the upper lobe. The number of myotomes and dorsal fin-ray chambers is also often larger in *B. platæ*, although there is no clear distinction from *caribæum* in these respects.

Reviewing the several specimens we have had, some characteristics of the species *caribæum* have been found, but the most of them agree with the species *platæ*. The following table give an account of these peculiarities of 51 Lancelets from Ilha de São Sebastião and 13 from bay of Santos.

T A B L E

Recorded counts for 50 specimens from Ilha de S. Sebastião and 23 from Bay of Santos

Specimens from Ilha São Sebastião	Number of fin-ray chambers			Number of myotomes				Position of the anus	* Number of gonads
	Dorsal	Caudal	Pre-caudal	Before the atrio-porus	Between the atrio-porus and the anus	Postanal	Total	Myotome n.º	
1	268	10	20	36	15	5	56	48	26
2	292	8	25	35	15	8	58	48	26
3	263	5	18	42	15	7	64	57	—
4	256	13	24	37	17	7	61	51	—
5	263	5	20	39	14	6	59	53	29
6	264	7	27	37	16	8	61	53	27
7	251	6	17	35	16	6	57	51	28
8	288	16	32	35	14	8	57	50	18
9	275	17	24	38	15	6	56	53	24
10	273	17	16	34	14	7	55	48	—
11	251	9	25	35	12	9	56	47	—
12	276	2	20	39	11	7	57	53	24
13	288	8	23	40	9	7	56	54	27
14	280	14	26	37	14	7	58	51	30
15	284	10	24	37	14	6	57	51	23
16	295	16	25	38	14	7	59	52	28
17	291	13	22	37	13	7	57	50	26
18	284	11	19	40	14	8	62	54	31
19	302	19	23	37	15	7	59	52	29
20	262	17	34	36	15	7	58	51	44
21	293	8	31	38	16	6	60	54	27
22	270	9	17	40	14	7	61	54	27
23	280	11	27	36	15	7	58	51	21
24	291	15	22	38	14	7	59	52	28
25	280	16	26	38	14	7	59	52	24
26	267	4	19	39	13	7	59	52	—
27	287	10	26	37	15	6	58	52	27
28	272	14	27	37	14	7	58	51	25
29	289	12	27	35	17	6	58	52	30
30	267	13	30	36	15	6	57	51	26
31	253	9	24	39	14	7	60	53	—
32	305	7	20	39	15	7	61	54	28
33	264	9	20	36	16	6	58	52	16
34	275	14	37	37	16	7	60	53	29
35	283	10	21	36	16	7	59	52	26
36	268	12	27	38	15	6	59	53	29
37	279	13	27	38	16	7	61	54	30
38	275	11	24	38	15	7	60	53	33
39	277	15	38	36	16	7	59	52	23
40	249	9	28	38	16	7	61	54	28
41	268	9	13	38	15	6	59	53	29
42	292	13	25	40	16	8	64	56	31
43	272	16	21	39	15	7	61	54	23
44	300	17	27	37	16	7	60	53	27
45	258	8	22	38	13	7	58	51	27
46	268	9	23	37	14	6	57	51	27
47	253	10	17	38	17	7	62	55	28
48	277	15	20	36	13	6	55	49	27
49	278	14	21	38	17	7	62	55	27
50	287	7	24	38	16	7	61	54	29
51	280	11	26	39	16	6	61	55	26

Specimens from Santos

1	275	11	21	37	17	6	60	54	23
2	296	10	15	37	17	7	61	54	—
3	287	14	21	37	14	7	58	51	—
4	294	12	28	37	16	7	60	53	—
5	294	9	21	37	15	7	59	52	—
6	270	10	21	38	17	7	62	55	—
7	279	13	21	36	16	7	59	52	—
8	300	9	18	40	16	7	63	56	—
9	265	11	23	38	17	7	62	55	—
10	305	11	33	42	16	7	65	58	—
11	310	9	31	38	15	7	60	53	—
12	282	12	27	36	15	7	58	51	26
13	293	16	35	38	16	7	61	54	—

Comparing the table with the figures indicated by BIGELOW & FARFANTE (1.c., p.14) the number of the dorsal fin-ray chambers of our Lancelets rather agrees with those of *caribæum*, but in all the 301 specimens the lower lobe of its caudal fin originates considerably anterior to the origin of the upper lobe. Only in 16 Lancelets was this upper lobe almost not differentiated from the dorsal fin.

The position of the anus is not considerably posterior to the midpoint of the lower lobe of the caudal fin, as BIGELOW & FARFANTE (1.c., p.16) point out for *B. platæ*. Our Lancelets show the anus very near the midpoint of the lower lobe of its caudal fin, but this characteristic alone, in our opinion, does not justify their separation from *B. plaetæ*. As we know, the specific characters have great variation. But the majority of the characteristics of the Lancelets from the coast of São Paulo do agree with those furnished by the authors for *B. platæ*.

To complete the BIGELOW & FARFANTE 's description of *B. platæ*, we have to mention that the Lancelets we have collected alive are whitish, semi-transparent, with blue metallic iridescence, and when kept in alcohol they become opaque and those kept in formalin become flesh-colored.

In conclusion, it can be said that, notwithstanding the position of the anus nearer the midpoint of the lower lobe of the caudal fin, the remaining characters give us good reasons to identify the Lancelets from the Bay of Santos and from the Ilha de São Sebastião, as *Branchiostoma platæ* HUBBS, 1922, as BIGELOW & FARFANTE suggested.

REFERENCES

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