

SMITHSONIAN MISCELLANEOUS COLLECTIONS

VOLUME 66, NUMBER 18

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Goode and Bean on the Coast of  
British Columbia

BY

C. H. GILBERT

Professor of Zoology, Stanford University, Cal.



(PUBLICATION 2439)

CITY OF WASHINGTON

PUBLISHED BY THE SMITHSONIAN INSTITUTION

FEBRUARY, 1917

The Lord Baltimore Press  
BALTIMORE, MD., U. S. A.

ON THE OCCURRENCE OF  
*BENTHODESMUS ATLANTICUS* GOODE AND BEAN  
ON THE COAST OF BRITISH COLUMBIA

By C. H. GILBERT

PROFESSOR OF ZOOLOGY, STANFORD UNIVERSITY, CAL.

A specimen of *Benthodesmus*,  $41\frac{1}{2}$  inches long, was obtained May 30, 1916, from a fish dealer in Victoria, B. C., having been caught by fishermen off Bentinck Island, which lies near Race Rocks, about ten miles off water from Victoria. The specimen is the property of the Provincial Museum of Victoria, and has been submitted to us for identification by Mr. F. Kermodé, the Director of the Museum.

*Description:* Greatest width of body  $2\frac{2}{3}$  in height at vent. Length of caudal peduncle half greatest height of body. Least height of tail  $\frac{1}{3}$  bony interorbital width. Greatest width of head  $\frac{1}{6}$  its length. Greatest height of head  $3\frac{3}{4}$  in its length. Width of interorbital area (bony)  $\frac{1}{4}$  height of head. Length of snout  $2\frac{1}{4}$  in head. Tip of maxillary not reaching the orbit, the length of maxillary equaling the postorbital part of head. Length of lower jaw  $1\frac{7}{8}$  times greatest height of body. Flexible part of mandibular tip short in the preserved specimen, about  $\frac{1}{4}$  diameter of orbit. Eye postmedian,  $5\frac{1}{3}$  in head,  $2\frac{1}{3}$  in length of snout.

Sides of maxillary with 9 or 10 triangular teeth, which decrease from middle of sides of jaw both forwards and backwards. Two pairs of narrow compressed fangs in the anterior part of the upper jaw, the anterior pair immediately behind the tip, the posterior pair separated by a considerable interspace, but located in front of the series of compressed lateral teeth already described. In advance of the most anterior of the compressed lateral teeth, a series of 6 or 7 short slender conical teeth continued forwards to the anterior pair of fangs and passing outside the posterior pair of fangs. Side of mandible with 14 or 15 compressed triangular teeth in a single series, decreasing in length forwards, and inclined slightly towards the front of the jaw. In advance of these, on each side of the symphysis, are two pairs of short retrorsely directed teeth, the anterior pair much shorter than the posterior pair. Other bones of the mouth toothless.

First gill-arch with 4 or 5 to 7 or 8 slender short distant rakers, the longest about 2 mm. in length. Each rises from a plate which

bears short spines, and between each pair of these plates, on the outer surface of the arch, are interposed two similar smaller plates, which do not bear rakers. The rakers are borne only on the posterior third of the horizontal limb of the arch, but the spinous plates are continued farther forwards, and become merged along the anterior part of the arch in a narrow spinous strip. The other arches are similar to the first, but contain fewer free rakers. The upper pharyngeals are well toothed and work against the spinous plates on the horizontal limbs of the arches.

First dorsal ray slightly in advance of the middle of the operculum, the front of the orbit midway between the first ray and the tip of the snout. There are 142 rays in all, the posterior the longest. The rays rise from the anterior ends of a series of interneural bones, which form a sharp ridge along the dorsal profile.

The vent is beneath the 46th dorsal ray, its distance from the tip of the snout  $3\frac{1}{7}$  times the length of the head. Distance from vent to postanal scute  $\frac{5}{8}$  diameter of orbit. Immediately behind the scute begins a series of 88 interhæmals, which form a continuous sharp ridge along the lower profile. The anterior ones bear no rays, but these gradually appear posteriorly, about 40 of the posterior plates bearing evident free rays, which increase in length posteriorly.

The pectorals contain 12 rays, the lower distinctly the longest, equaling the postorbital length of the head. Ventrals mutilated, their base posterior to that of pectoral by  $\frac{2}{5}$  diameter of orbit. Caudal deeply forked, its longest ray equaling the diameter of the orbit.

Color silvery, becoming posteriorly steel gray, and finally black. Lips black, as are also the inside of the mouth and the gill-cavity, including the gill-arches. Peritoneum also black.

One specimen,  $41\frac{1}{2}$  inches long, the property of the Provincial Museum of British Columbia.

*Benthodesmus elongatus* (Clarke) from New Zealand differs notably from this species in the much more elongate form, the depth scarcely exceeding one-fortieth of the length. The third species of the genus, *B. tenuis* (Guenther) from Japanese waters, has much shorter vertical fins, the dorsal having but 126 rays and the anal but 71 rays. The specimen in hand differs in only minor respects from the description of *B. atlanticus* given by Goode and Bean. The width of the body is slightly greater,  $2\frac{2}{3}$  in its height; the snout slightly longer, its length  $2\frac{1}{4}$  in the head; the mandibular tip shorter,  $\frac{1}{4}$  the orbit; the eye smaller,  $2\frac{1}{3}$  in the snout. And there are four long teeth in the upper jaw, instead of three. The species has been known hitherto from a single specimen.