

Studies on the Deep-water Fishes from off Hokkaido and
 Adjacent Regions (continued from p. 82)

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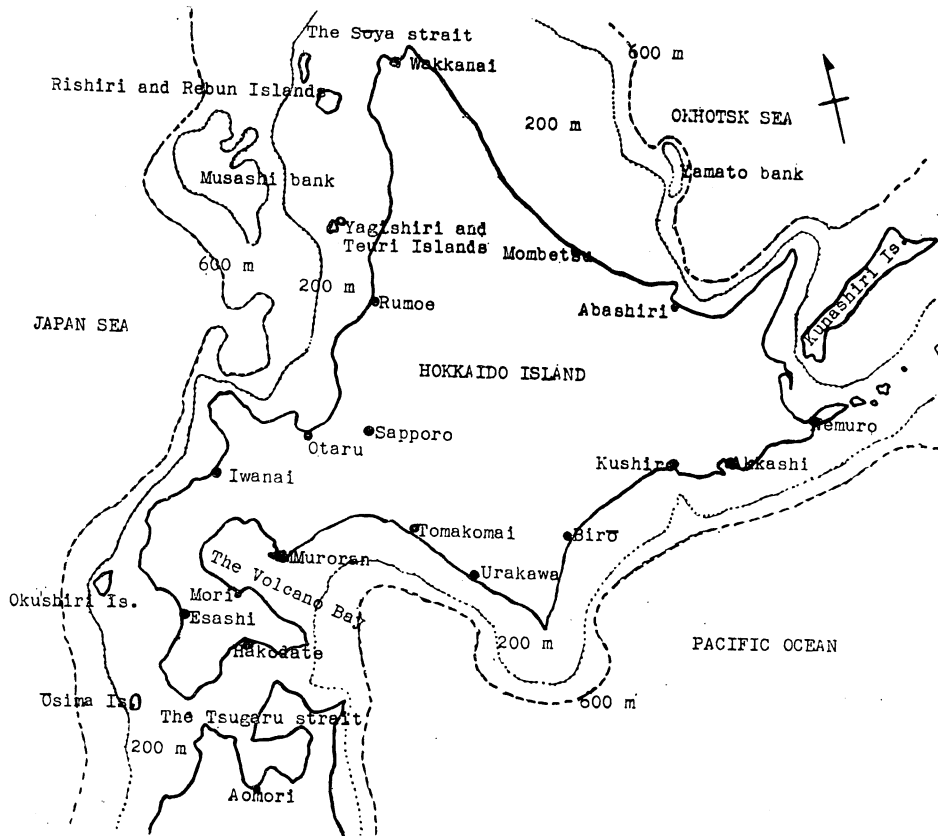


Fig. 1. The map of Hokkaido. showing the important trawl-fishing ports and fishing grounds of Hokkaido.

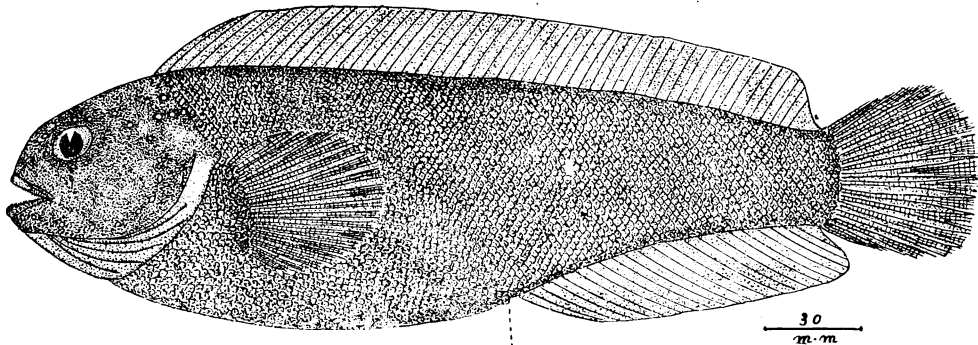


Fig. 2. *Zaprora silenus* JORDAN.

II. On a new blenny, *Opisthocentrus ochotensis*, from Okhotsk Sea

The present description is based upon a specimen, taken at a depth about 250 m., by the bottom-trawl boat from a spot off Mombetsu, fronts on Okhotsk Sea in November 13, 1952.

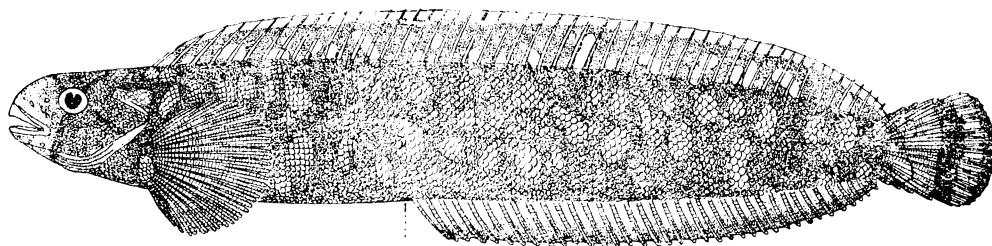


Fig. 3. *Opisthocentrus ochotensis*, n. sp. After holotype.

Opisthocentrus ochotensis, n. sp.

new Japanese name "Akaten-ginpo"

Holotype..... male, measuring 215 mm in total length, off Mombetsu. (Preserved in Fac. Fish. Hokkido Univ., Hakodate, Japan.)

D. LVII; A. II 37; P. 21; B. 4; Gill-rakers of the first gill arch 17 in number; Pyloric coeca 3.

Head 6.71 in body length; depth 7.80; distance from tip of snout to front of anal fin 2.10. Width of head 2.08 in head length; snout 4.15; maxillary 2.90; eye 4.85; depth of caudal peduncle 2.08; interorbital space 4.15; postorbital part of head 1.81; longest dorsal spine 1.32; same of anal ray 3.23; pectoral fin length 1.26; caudal fin length 1.32.

Body elongate, moderately compressed. Head rather small, its length slightly longer than the longest pectoral ray, the upper profile gently convex. Eye round, its diameter as equal as snout and interorbital space, which are slightly convex. Mouth small, oblique, the upper jaw projecting beyond the lower when the mouth is closed; tip of lower jaw truncated; lips thickened; maxillary reaches to below the front of eye. Teeth small, conical, set in a row on each jaw, 12 on upper and 10 on lower jaw, each tooth separate together; vomer and palatine toothless. Gill-membranes broadly connected, but free from isthmus. Pseudobranchiae present; gill-rakers short, more or less triangular in shape, their tips pointed, 4 on upper and 13 on lower arm of the first gill-arch in number. Two nostrils on each side of snout, the anterior one not tube, slit-like pore; the posterior one bearing a moderately long and broad tube. Many small mucous pores on lower jaw, preopercles, parietal regions and about orbit, 4 on mandible; the similar 4 on lower rim of opercle; large 2 on vertical rim of the same; 2 in front of eye, and smaller 2 on preorbital rim; 3 on posterior margin of orbit; another one above the eye; the similar one at middle of interorbital space; 1 at vertex; 3 along temporal region; 1 at parietal region on each side.

Dorsal fin inserted above the upper axil of pectoral fin; the spines slender and flexible except hindmost 6 stiff, curved, pungent spines, which are projecting from

fin membrane; fin increases gradually in height toward middle part of it; the longest spine as well as length of pectoral fin; the membrane of the last spine joins with the upper base of caudal fin. Anal fin originating under the 17th dorsal spine; the fin lower than dorsal; the rays all branched; membrane of the last ray joins with the lower base of caudal fin. Pectoral fin rounded, longer than 3 times diameter of eye; the middle ray longest. Ventral fin entirely absent. Caudal fin rounded, its length as equal as the length of pectoral fin. Lateral line indistinct, but it runs along the middle of body from the upper angle of gill-opening to the base of caudal fin. Scales small, cycloid and imbricated; top of head, basal half of vertical fins, basal fourth of pectoral and caudal fin covered with smaller scales; jaws, snout, gill-membrane and eye naked.

Color in life, dark-brown in back and side of body, but belly lighter; many large or small clear-red spots on body and dorsal fin membrane, the similar 2 on the base of caudal fin; snout rose; 4 black-bars radiating from the eye; gill-membranes red; dorsal membrane black, and with a red, narrow, marginal band which runs along the outer-margin of dorsal fin; anal fin deep-blue at the marginal part, but basal half becoming light-blue; pectoral fin yellowish except its dusky base; caudal with 2 orange cross bands posteriorly, and the rearmost one forming a marginal band; peritoneum pale; mouth-cavity black.

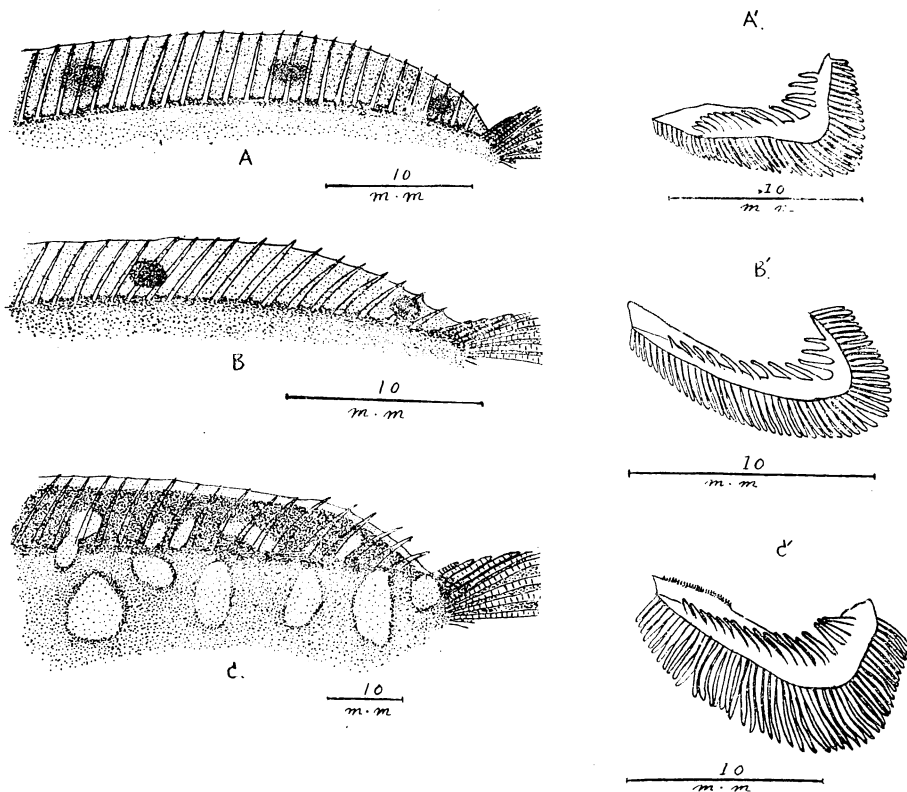


Fig. 4. Comparison of posterior stiff spines of dorsal fin and gill-arch on left side of body in three species of *Opisthocentrus*. A, A'. *O. ocellatus*; B, B'. *O. zonope*; C, C'. *O. ochotensis*, n. sp.

Table 1. Summary comparison of characters in four related species, *Opisthocentrus ochotensis*, n.sp.; *O. ocellatus*; *O. zonope* and *Abryois azumae*

Items	<i>O. ocellatus</i>	<i>O. zonope</i>	<i>O. ochotensis</i>	<i>A. azumae</i>
Number of specimen	15	3	1	7
Localities	Oshoro Bay	Oshoro Bay	Mombetsu	Oshoro Bay Mombetsu
Body length (mm)	63-110	48-54	195	46-158
Dorsal spines	LV-LXII	L-LI	LVII	LIX-LXII
Anal rays	II. 35-38.	II. 33-34	II. 37	II 40-42
Pectoral rays	19-20	19-20	21	18-19
Gill-rakers on upper limb of first gill-arch	3-5	3-8	4	4
Gill-rakers on lower limb of first gill-arch	10-11	8-9	13	14-15
Pungent spines of hindmost part of dorsal fin	10-16	8-15	6	24-33
Head in body length	4.13-4.80	4.15-4.35	6.71	5.00-5.54
Depth in body length	5.80-7.20	5.40-6.42	7.80	6.00-6.70
Snout in head length	3.12-3.35	3.25-3.66	4.15	3.20-3.76
Maxillary in head length	3.25-3.58	3.45-3.71	2.90	3.00-3.68
Eye in head length	4.00-4.40	3.51-3.71	4.15	3.40-3.76
Depth of caudal peduncle in head length	2.75-3.35	2.63-3.60	2.08	2.44-2.71
Interorbital in head length	5.00-5.50	3.25-4.21	4.15	4.22-4.41
Postorbital part of head in head length	1.82-2.00	1.75-1.91	1.81	1.60-1.83
Longest dorsal spine in head length	2.00-2.77	3.00-3.25	1.32	2.71-3.44
Longest anal ray in head length	2.51-3.15	3.94-4.34	3.23	3.22-3.40
Pectoral fin length in head length	1.52-2.00	1.75-1.84	1.26	1.50-1.83
Caudal fin length in head length	1.30-1.78	1.57-1.95	1.32	1.47-1.75
Number of black spots on dorsal fin membrane	5-7	4-5	0	0-2.
Head	scalely	scalely	scalely	naked

The present new species closely resembles to *Opisthocentrus ocellatus* and *O. zonope* known from the shallow-waters of northern Japan, but distinguishable from them by following features :

- 1) . Characteristic colorations, particularly it with many beautiful red spots on side of body and dorsal fin membrane.
- 2) . Fewer number of dorsal pungent or projecting spines, 6 in present new species, but 10 to 16 in *O. ocellatus* and 8 to 15 in *O. zonope*.
- 3) . Lateral line present, but indistinct, (entirely absent in others) .
- 4) . Head length longer than those of other two, 6.71 in body length.
- 5) . Pectoral fin somewhat shorter than length of head, 1.26 in head, but in other two species, pectoral fin much shorter than head length.

And also, the present new species is quite alike to *Abryois azumae* Jordan & Snyder in general form, but can easily be distinguish from it in having small scales on top of head and opercular bones, fewer number of dorsal spines, anal rays and dorsal hindmost stiff spines, and also strikingly characteristic colorations.

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Addition to the references for *Zaprora* (*vide* the author's previous paper, 1954, pp. 79 - 82.)

The following should be added to below the last line of References (p. 82)

- CLEMENS, B. W. & WILBY, G. V. 1949: Fishes of Pacific coast of Canada, Bull. Fish. Res. Bd. Canada, no. 6, pp. 1-368, figs. 1-253.
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