

Dixon, Meaus, Marchard, or Vancouver, except that Means mentions them casually as *sardines*, and says the Indians are as fond of them and make quite as much account of them as they do of salmon. They are found in countless myriads in the waters of Alaska Territory, but hitherto no other use has been made of them in that Territory except as an article of food for the Indians.

If some of the canneries of Alaska would try the experiment and put them up in oil similar to sardines, I predict that a lucrative trade would result. No regular statistics of the Eulachon fishery have ever been kept either in British Columbia or Alaska, and the foregoing meager account of a very important food-fish is all that I have been able to procure.

DESCRIPTION OF TWO NEW SPECIES OF FISHES, ASCELICHTHYS RHODORUS AND SCYTALINA CERDALE, FROM NEAH BAY, WASHINGTON TERRITORY.

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*Ascelichthys*, genus nova.

Family of *Cottidae*. Body rather robust, covered with naked skin. Head comparatively broad and depressed, covered with naked skin. Preoperele with a simple, strongly hooked spine. Villiform teeth on jaws, vomer, and palatines. No slit behind fourth gill. Gill membranes broadly united, free from the isthmus. No ventral fins. Spinous dorsal of low flexible spines. Other fins normally developed. This genus has the general appearance of *Oligocottus*, but is distinguished at once from all the known genera of the family by the absence of the ventral fins; hence the generic name from *ασκελής*, without leg, and *ἰχθός*, fish.

*Ascelichthys rhodorus*, sp. nov.

Body rather plump, broad, and low anteriorly, nearly cylindrical mesially, becoming compressed behind. Head comparatively broad and low, ovate, regularly narrowed forward, and rounded anteriorly. Eyes rather large, placed high, separated by a slightly concave interorbital space, narrower than the eye. Mouth rather large, nearly horizontal, the maxillary extending to opposite the posterior border of the eye. Lower jaw slightly shorter than upper. Lips rather full, the upper jaw protractile. Teeth small, in villiform bands on jaws, vomer, and palatines. The palatine bands long and narrow. Pseudobranchæ large. Gill-rakers almost obsolete. No slit behind the fourth gill. Branchiostegals six. Gill-membranes broadly united, free from the isthmus. A low, fringed dermal flap above the posterior part of each eye. No other cirri anywhere, and no trace anywhere, on body or head, of dermal prickles or scales. No nasal spines. Nostrils both with short tubes, the anterior the longer.

Suborbital stay very slender, barely reaching the preoperele. Preoperele with a rather short simple spine, strongly hooked upwards and in-

wards, concealed in the skin. A concealed downward-directed spine below this. A downward-directed spine on front of opercle below.

Skin comparatively thin and loose. Lateral line complete and continuous.

Dorsal fins connected by a membrane about half the height of the first dorsal. Dorsal spines low and weak, nearly uniform in height, the middle spines very slightly higher than the others, the highest less than the diameter of the eye, the two anterior close together. The spines all very slender. The enveloping membrane very thick.

Soft dorsal nearly twice as high as the spinous part. Anal about as high as second dorsal, its rays more robust. Pectoral fins rather broad and short, strongly procurvent below, the lower rays thickened. Longest rays reaching past vent to beginning of second dorsal. No trace of ventral fins, either externally or under the skin.

Fin rays: Dorsal IX or X-18 or 19; A. 13; P. 16.

Anal papilla very small. Six pyloric cæca. Intestines short, about as long as body, with one flexure. Stomach filled with Chiton, Patella, small Crustacea, snails, and worms.

Coloration olivaceous, usually rather dark, and shaded with greenish, but sometimes with whitish saddle-like blotches, one on each side of the head, one on preopercle, one at front of dorsal, one most conspicuous opposite the junction of the two dorsals, and two smaller ones under second dorsal. On most of the specimens these markings are but faintly indicated. Belly somewhat dusky. Lips, in most specimens, edged with vermilion, especially the lower.

Spinous dorsal fin dusky, black in the middle and in front above, *with a conspicuous edging of bright crimson*. This marking is rarely faint or obsolete. Soft dorsal, anal, and caudal dusky, edged with paler. Pectoral dusky, edged with paler, and slightly barred at base, especially in the paler specimens.

This species is known to us from about 200 examples, from two to four inches in length, obtained by us at Waadda Island, in Neeah Bay, near Cape Flattery, at the entrance to the Straits of Juan de Fuca. It is found in the greatest abundance at this locality under rocks between tide-marks. It is less active in its movements than the species of *Oligocottus*, and unlike them it is often found out of the water, left in damp places under the rocks by the receding tide.

The following species have been obtained by us in this locality, which is the richest in rock pool fish of any which we have anywhere seen:

Xiphister mucosus,  
 Xiphister rupestris,  
 Xiphister chirus,  
 Ascelichthys rhodorus,  
 Gobiesox reticulatus,  
 Anoplarchus atropurpureus,

Murænoides lætus,  
 Apodichthys flavidus,  
 Apodichthys fucorum,  
 Oligocottus globiceps,  
 Oligocottus maculosus,  
 Scytalina cerdale.

Table of proportional measurements.

Species: *Ascelichthys rhodorus*.

Locality .....	Neeah Bay.	
	Inches and 100ths.	100ths of length to base of caudal.
Extreme length .....	3.90	.....
Length to base of middle caudal rays .....	3.40	.....
Body:		
Greatest height .....		21
Least height of tail .....		8
Head:		
Greatest length .....		30
Greatest width .....		27
Width of interorbital area .....		5
Length of snout .....		5
Diameter of orbit .....		6
Dorsal ( <i>spinous</i> ):		
Distance from snout .....		30
Length of base .....		26
Greatest height .....		4½
Dorsal ( <i>soft</i> ):		
Length of base .....		34
Height at longest ray .....		10
Anal:		
Distance from snout .....		56
Height at longest ray .....		9
Caudal:		
Length of middle rays .....		16
Pectoral:		
Length .....		24
Ventral:		
Length .....		0
Branchiostegals .....		6
Dorsal .....		IX, 18
Anal .....		13
Pectoral .....		16
Ventral .....		0
Number of caecal appendages .....		6

**Scytalina**, gen. nov.Family *Congrogadidae*, allied to *Congrogadus* Günther.

Body anguilliform, cylindrical anteriorly, compressed behind, covered with very small, imbedded cycloid scales. No lateral line. Head broad, with tumid cheeks, broader than body, resembling a serpent's head. Lower jaw slightly projecting. Each jaw with two strong canines in front, besides which is about one series of small, close-set conical teeth in the lower jaw and a broad patch in the upper. A single series of small teeth on vomer and palatines. Branchiostegals six. Gill-openings very wide, the membranes broadly connected below and free from the isthmus. Pseudobranchiæ small, present. A slit behind fourth gill. Tongue largely free anteriorly. Intestines short, without pyloric cæca. Pectoral fins very small. No ventral fins. Dorsal fin very low, without spines, *beginning near the middle of the body*. Anal similar, and beginning nearly opposite it. Tail rounded behind. Caudal fin well developed, joined to dorsal and anal. Vent near the middle of the body. No anal papilla.

Etymology: diminutive of *Scytale*, a genus of serpents, in allusion to the form of the head and neck and the fang-like canines.

The relations of this genus seem to be with *Congrogadus* Günther, from

which it differs in the presence of canines and in the short dorsal fin. This is the first species of the family thus far known from north of the equator.

*Scytalina cerdale*, sp. nov.

Body elongate, cylindrical anteriorly, compressed behind, covered with very small imbedded scales. No lateral line. A slight vertebral streak and three very obscure dusky lateral streaks simulating lateral lines.

Head broader than long, with tumid cheeks and constricted neck, much resembling the head and neck of a small snake. Form of snout subconic, the head abruptly narrowed at the eyes, below which is a slight vertical groove. Snout depressed, rounded at tip.

Interorbital space rather broad, posteriorly concave, a median wrinkle extending along the vertex to the nuchal depression. All these depressions are rather apparent than real, being due to the tumidity of the cheeks, which encroach on the other parts.

Eyes quite small, directed almost upward, nearly even with the top of the head. Lips full, the upper separated by a crease from the skin of the forehead, the lower with free margin. Skin of forehead with two or three dermal flaps on each side. In one of these the anterior nostrils and some mucous pores open. Posterior nostril near the eye, with a very small flap. Edge of lower lip sparsely fringed, below which the skin has several coarse pores with dermal flaps.

Gape of mouth rather wide, extending a little beyond the eyes. Lower jaw slightly projecting, its front with two strong, conic, divergent canines. Between these, and behind, along the sides of the jaw, is a series of smaller close-set conical teeth. Upper jaw with two smaller canines, closer together than those in the lower jaw. Edge of upper jaw with close-set conical teeth, apparently in a single row behind, widening into a broad band in front. A single series of small teeth on vomer and palatines.

Branchiostegals seven. Gill-openings very wide, the membranes broadly connected and free from the isthmus. Pseudobranchiæ small. Gill-rakers almost obsolete. Gills four, a slit behind the fourth. Opercle very short, the tumid cheeks encroaching upon it.

Pectoral fins very small, a little below the axis of the body, their length a little more than the diameter of the eye. No ventral fins. Dorsal fin very low, of soft rays only, which are short and weak, imbedded in the skin. Its insertion a little in front of first ray of anal and slightly in advance of the middle of the body. Tail apparently isocercal, rounded behind, with a well-developed caudal fin, which is rounded behind, and composed of rays longer and much slenderer than those in the dorsal and anal. No constriction between dorsal and anal and caudal, the rays of the former fins being joined to the latter at their full height. Anal precisely like dorsal and nearly coterminous with it. Vent immediately in front of anal. No anal papillæ.

Intestinal canal a simple short tube, without cæcal appendages. Air bladder obsolete, or reduced to a filmy membrane. Nothing found in the stomach.

Flesh color, with much mottling of purplish above, in fine, close pattern, so that the light areas appear in the form of pale spots. Lower parts finely speckled like the back, except the belly, which is nearly plain. Fins similarly colored.

Anal nearly plain. Caudal reddish edged.

Fin rays not readily counted. Dorsal about 41. Anal 36.

Two specimens of this species were obtained by us at Waadda Island; a third was seen, but it escaped us. It inhabits piles of shingle and small boulders near the mark of lowest tides, and when disturbed makes its way downward with great celerity through small crevices into the water. The specimens taken are each about  $5\frac{1}{2}$  inches in length.

Table of proportional measurements.

Species: *Scytalina cerdale*.

Collector's number of specimen.....	No. 226.	
Locality.....	Neerah Bay.	
	Inches and 100ths.	100ths of length to base of caudal.
Extreme length.....	5.80	
Length to base of middle caudal rays.....	5.50	
Body:		
Greatest height.....		7
Head:		
Greatest length.....		13
Distance from snout to nape.....		9
Greatest depth.....		$7\frac{1}{2}$
Greatest width.....		6
Width of interorbital area.....		$2\frac{1}{2}$
Length of snout.....		$2\frac{1}{2}$
Length of cheek.....		7
Length of mandible.....		5
Diameter of orbit.....		$1\frac{1}{2}$
Dorsal:		
Distance from snout.....		45
Length of base.....		55
Greatest height.....		2
Anal:		
Distance from snout.....		46
Length of base.....		54
Vent:		
Distance from snout.....		42
Caudal:		
Length of middle rays.....		$5\frac{1}{2}$
Pectoral:		
Length.....		$1\frac{1}{2}$
Ventral:		
Length.....		0
Branchiostegals.....		7
Dorsal.....		ca 41
Anal.....		36
Number of cæcal appendages.....		0