

name of *Rhombus*, a name not tenable under the rules of nomenclature followed by us.

In 1839 the genus *Psetta* was proposed by Swainson (Nat. Hist. Classn. Fishes, etc., ii, 302) in the following words :

"*Psetta Aristotle*,* Cuv.—Body rhomboidal ; dorsal fin commencing at the edge of the upper jaw, and extending, as well as the anal, almost to the caudal ; eyes approximating, with a short, crest-like cirrus.

"P. MAXIMUS, Bloch, pl. 49."

This name *Psetta* is adopted by Bonaparte (Catalogo Metodico di Pesci Europei, 1846, 49) for the entire group called *Rhombus* by Cuvier, while the name *Bothus* is transferred to a different genus which had been previously called *Platophrys* by Swainson, and later *Rhomboidichthys* by Bleeker. The name *Scophthalmus* is likewise diverted from its original meaning, and is used for the genus previously named *Zeugopterus* by Gottsche.

In 1862 (Proc. Acad. Nat. Sci., Phila. 1862, 216) an American species (*Pleuronectes maculatus*, Mitchill) which, from any point of view, is strictly congeneric with *Pleuronectes rhombus* L., was recognized by Professor Gill as the type of a distinct genus (*Lophopsetta* Gill). In 1882 (Syn. Fish. N. Am., 815) the present writers have referred this species to the genus *Bothus*, recognizing as the type of *Bothus*, *Bothus rumolo* Raf., = *Pleuronectes rhombus*, L.

Whether the extremely rudimentary or obsolete condition of the scales of *Pleuronectes maximus* L., justifies its separation from *Bothus* as a distinct genus we are not yet prepared to say. At present we may regard it as the representative of a distinct subgenus, for which the name *Psetta* must apparently be retained. The three species noticed in the present paper may therefore stand as

1. *Bothus (Bothus) rhombus* (L.).
2. *Bothus (Bothus) maculatus* (Mitch.).
3. *Bothus (Psetta) maximus* (L.).

INDIANA UNIVERSITY, October 9, 1882.

DESCRIPTION OF A NEW SPECIES OF ARTEDIUS (*ARTEDIUS FENESTRALIS*) FROM PUGET SOUND.

BY DAVID S. JORDAN AND CHARLES H. GILBERT.

Artedius fenestralis sp. nov.

Closely allied to *Artedius notospilotus* Girard.

Head, $2\frac{2}{3}$ in length to base of caudal ; depth, $4\frac{1}{3}$. D. IX-17. A. 12. Lat. l. 36.

Length (27206), 5 inches.

* "I see no reason for substituting *Rhombus* Cuv., for the more ancient and classic name of *Psetta* imposed by Aristotle upon this group."—Swainson.

General form of *A. notospilotus*, the body rather robust; the head large and broad. Lower jaw included. Maxillary extending to posterior part of eye, $2\frac{1}{2}$ in head. Eyes rather large, 5 in head, about one-third broader than the concave interorbital space. Nasal spines strong, with a conspicuous cirrus behind them. Top of head less depressed and less concave than in *A. notospilotus*; its lateral ridges smooth and covered by skin, without spine-like projections. No tubercular prominences behind eye. Preopercle ending in a short process, which has usually three spines at its tip, the two uppermost hooked upward. The three prominences below this spine are small, entire, covered with smooth skin. (In *A. notospilotus* these projections are much larger, and more or less coarsely serrate.) A few small dermal flaps on top and sides of head. Head with small stellate, non-imbriate scales, arranged much as in *A. notospilotus*, but extending lower on the sides of the head, covering the suborbital and postorbital regions, as far down as the suborbital stay. Scales on body cup-shaped, arranged, as in *A. notospilotus*, in a broad band along each side of the back; each band about 9 scales in breadth. This band extends much further back than in *A. notospilotus*, meeting its fellow across the back of the tail behind the dorsal fin. A small but distinct pore-like slit behind the fourth gill (wholly wanting in *A. notospilotus*).

Fins low, the dorsal much lower than in *A. notospilotus*; the longest dorsal spine about equal to snout; $3\frac{1}{2}$ in head (in the female), probably higher in the males. Ventrals about reaching vent; pectorals past front of anal.

Color, in spirits, essentially as in *A. notospilotus*, but paler; olivaceous, the head mottled and barred with blackish; back with about 4 saddle-like black bars. Base of caudal blackish. Fins all, except the ventrals, which are pale (probably dusky in males), with cross-bars and series of spots. A black blotch bordered by orange between first and second dorsal spines, and another between 7th and 8th.

This species is evidently the northern representative of *Artedius notospilotus*, but has apparently become so thoroughly differentiated from the latter as to be worthy of a distinct specific name. In *A. notospilotus*, the head is more uneven, the body and head less completely scaled, the fins larger, the armature of the preopercle different, and especially there is no trace of slit behind the last gill.

Several specimens of this species were obtained by the writers in Commencement Bay, near New Tacoma, Washington Territory, in June, 1880. These are numbered 27206 and 27146, and some of them have been distributed by the National Museum as "*Artedius notospilotus*." The latter species was found by us in abundance only at Santa Barbara. Girard's original types apparently included both species, but his description applies best to the southern form.

If we include in the genus *Artedius* all the species (*lateralis*, *fenestratus*, *notospilotus*, *quadriscriatus*, *pugettensis*, *megacephalus*) from the west

coast of the United States, which have been referred to it, it becomes practically impossible to separate it from the genus *Icelus* of Kröyer. Some of the different members of *Artedius* are more like *Icelus hamatus* than they are like each other. At present we are unable to draw any satisfactory dividing line among these species, and elsewhere (Syn. Fish. N. A., 689) we have referred all of them to *Icelus*. In the same memoir we have mentioned the specimens which here become the types of *A. fenestralis* as "Northern specimens," representing "a marked variety" of *Icelus notospilotus*.

INDIANA UNIVERSITY, October 11, 1882.

DESCRIPTION OF A NEW SPECIES OF UROLOPHUS (UROLOPHUS ASTERIAS), FROM MAZATLAN AND PANAMA.

BY DAVID S. JORDAN AND CHARLES H. GILBERT.

UROLOPHUS ASTERIAS sp. nov.

Disk almost round, a little broader than long; its length just about equal to length of tail. Anterior margins of disk nearly straight, the tip acute, slightly exerted, much less prominent than in *U. aspidurus*, longer in the male specimen than in the females. Distance from eye to tip of snout, about one-fourth length of disk and a little more than twice interorbital width. Interorbital space somewhat concave. Eyes small, much smaller than the large spiracles, the diameter about half the interorbital width. Width of mouth $2\frac{1}{6}$ in its distance from tip of snout. Teeth conic and sharp in the males, blunter and somewhat pavement-like in the females. Nostrils directly in front of angles of mouth; nasal folds forming a broad continuous flap, the edges of which are slightly fringed.

Ventrals projecting a little beyond outline of disk. Caudal spine very long, somewhat longer than snout, its insertion considerably in front of middle of tail. Caudal fin moderate, the upper lobe deepest, inserted opposite tip of caudal spine, the lower lobe beginning farther forward, the depth of the tail with caudal fin, about half the interorbital space.

Skin above everywhere rather sparsely covered with small stellate prickles, these larger and more numerous toward the median line of the back and head; wanting on the ventral fin. Males and females about equally rough. Median line of back with a series of rather strong, sharp recurved spines, 18 to 32 in number, extending from the shoulders to the front of the caudal spine, these usually becoming much larger and sharper backward, but the largest much smaller than the spines in *U. aspidurus*.

Color, light brown, without distinct markings; tail, faintly edged with dusky; lower side white.