DOES THE PANTHER (FELIS CONCOLOR) GO INTO THE WATER TO KILL FISH?

BY LIVINGSTON STONE.

[Letter to Prof. S. F. Baird.]

My mind has been quite exercised lately on the question whether panthers go into the water to kill fish. They are so numerous and bold here this year, that they come to our very doors and kill pigs and fowls under our windows. We estimate that they have killed a hundred dollars' worth of hogs here this season, besides calves, colts, and full grown cattle and horses. As far as boldness is concerned, they are fully equal to jumping into our trout ponds and killing our trout. And if you think they are likely to do this, we will take special precautions against it. They easily jump over any obstacle not more than 15 feet high, so that our fences are no protection from them.

They frequently swim the river, which made me think that perhaps they might get into the trout ponds sometimes for a meal of fish.

UNITED STATES FISH COMMISSION,
Baird, Shasta County, California, September 21, 1882.

ON CERTAIN NEGLLECTED GENERIC NAMES OF LA CÉPÈDE.

BY DAVID S. JORDAN AND CHARLES H. GILBERT.

In the Histoire Naturelle des Poissons (1799-1803) of La Cépède a considerable number of generic names are proposed, some of them founded on errors of various sorts, others properly defined. About one-fourth of these were adopted by Cuvier and Valenciennes, and have come into general use. A large number are simple synonyms. The remainder, for different reasons, were set aside by Cuvier and Valenciennes, and new names proposed in their places. As the laws of priority are constantly becoming more and more urgent, we find ourselves obliged to go behind Cuvier, and to adopt these earlier names.

The present paper contains a discussion of some of these names, the adoption of which would affect the nomenclature of American fishes.
1. HIATULA.

In Gmelin's edition of the *Systema Natura*, p. 1287, under the genus *Labrus*, the following description appears:

*p. Cauda integra.*


_Habitat in Carolina, fascis nigris, 6–7 pictus._ D. Garden. *Labium retractile, intus rugosum; dentes in mandibulis uniariorii, in palato orbiculati; branchiarum operculum anterius margine punctatum; pinna dorsalis fere longitudinalis, radiis spinosis aequalibus, posterius nigra._

With the exception of the two characters, absence of the anal fin, and presence of rounded teeth on the palate, which belong to no fish of this type, this description applies well to a young tautog, and to no other fish which Dr. Garden could have obtained at Charleston. The specimen most likely was one in which the anal fin had been bitten off, an accident to which fishes are not unfrequently subject. The rounded teeth on the palate must be either the posterior teeth of the premaxillaries, which are bluntish, or possibly the papillae which cover the membrane before the vomer.

In the second volume of *La Cépède's* work (ii, 522, 1800), this species appears under the name of *Hiatula gardeniana*, as the type of a new genus, *Hiatula*, distinguished from *Labrus* by the absence of the anal fin.

As this character was merely the accident of a mutilated specimen, this genus is a virtual synonym of *Labrus*, and by many writers would be suppressed as such. The name *Hiatula*, however, stands on the same footing as that of *Micropterus*, which was likewise based by *La Cépède* on a mutilated fish. As *Micropterus* has now come into general use, we suggest that *Hiatula* be substituted for *Tautoga*.

2. GOBIONOMORUS.

The genus *Gobionomorus* was proposed by *La Cépède* (Hist. Nat. Poiss. ii, 583, 1800) as a subdivision of the Linnaean genus *Gobius*, with the following definition:

"Les deux nageoires thoraciques non réunies l'une à l'autre; deux nageoires dorsales: la tête petite; les yeux rapprochés; les opercules attachés dans une grande partie de leur contour."

In definition and in intention, this group corresponds to the genus *Eleotris* of Bloch and Schneider, as revised and restricted by Cuvier, for Bloch and Schneider seemed to have no clear idea of the group, and very few of the species referred by them to *Eleotris* are related to *Eleotris gryius*.

Four species are referred by *La Cépède* to *Gobionomorus*, viz., *G. gronovii* (= *Nomeus gronovii* (Gmelin) C. & V.) *G. taiba* (= *Eleotris strigata* (Broussonet) C. & V.) *G. dormitor* Lac. (later called *Platycephalus dormi-
tator by Bloch & Schneider = Philypnus dormantor (Lac.) C. & V.) and G. kaelreuteri (= Perioptalthmus kaelreuteri (Gmelin) Bloch & Schneider).

Of these species, the first, gronorii has no relation to Gobius, and does not correspond to the definition of Gobiomorus, as the gill membranes are free from the isthmus. Its association with the Gobies is an error which originated with Gmelin. It may therefore be omitted from consideration. The remaining modern genera included in Gobiomorus, viz, Eleotris Bloch & Schneider, 1801 (Subgenus Valenciennna Bleeker, 1856), Philypnus Cuv. & Val., 1837, and Perioptalthmus Bloch & Schneider, 1801, are all subsequent to Gobiomorus, and in place of one of them the latter name must be retained. It has not as yet been restricted by any author, so far as we know. It seems to us best to consider as the type of Gobiomorus, G. dormantor LaCépède, and therefore to use the name Gobiomorus instead of Philypnus. A serious practical objection to the consideration of taiboa (strigatus) as the type of Gobiomorus lies in the uncertainty whether this species is really congeneric with Eleotris gyginus, (which species must, we think, as "Eleotris pisonis," be considered the type of Eleotris). In Bleeker’s system, strigatus is made the type of a distinct genus (Valenciennna Bleeker) and placed at a distance from Eleotris, but no diagnostic features of importance have been made known by which it may be distinguished.


The genus Gobiomoroides was proposed by La Cépède (Hist. Nat. Poiss., ii., 592, 1800), with a definition identical with that of Gobiomorus except that "une seule nageoire dorsale" is substituted for "deux nageoires dorsales." Its type is Gobiomoroides piso La Cépède, a species which is considered by La Cépède identical with Gobius pisonis Gmelin, the "Eleotris" of Gronov.

Gobius pisonis Gmelin is identified by Cuvier & Valenciennes with Eleotris gyginus, with considerable doubt, however, as the descriptions and figures of the former species are both incomplete and erroneous. The identity is probably too doubtful to warrant the use of the specific name pisonis for gyginus. La Cépède’s description of G. piso, is, however, not taken from Gmelin, but from a dried fish "given by Holland to France." This specimen has 45 rays in the dorsal which is continuous, 23 in the anal, and the lower jaw has a series of canines besides the cardiform band. Whatever this fish may be, it is not an Eleotris, and the name Gobiomoroides cannot be used for Eleotris gyginus, even if it be shown that this species is identical with Gobius pisonis Gmelin.


The genera Kyphosus (La Cépède, Hist. Nat. Poiss., iii, 114, 1802), Pimelepterus (l. c. iv., 429, 1803): Dorsuarius (l. c. v., 482, 1803), and Xyster (l. c. v. 484, 1803), are identical, as has been shown by Cuvier.
and Valenciennes, vii, 254. The earliest of these names should be used, and *Kyphosus* should therefore supersede *Pimelepoterus*. The word should however be spelled with an initial C, as *Cyphosus*.

5. MONODACTYLUS.

The genera, *Monodactylus* La Cépède (Hist. Nat. Poiss., iii, 131, 1802, *M. falciformis* Lac.), *Centropodus* La Cépède (iii, 303, *C. rhomboeus* Lac.), and *Acanthoporus* (iv, 558; *A. argenteus* (Gmelin) and *A. Boddaerti* (Gmelin)) are all based on species of the genus afterwards called *Psettus* Cuv. & Val. This genus should therefore receive the name of *Monodactylus*.

6. SCOMBEROMORUS.

*Scomberomorus* (iii, 293; *S. plumierii* La Cép.) is based on a drawing by Plumier. The genus is distinguished from *Scomber* by the supposed continuity of the dorsal fins, a fallacious character. The species is identical with *Scomber regalis* Bloch, and the name *Scomberomorus*, if accepted, must supersede *Cybium* Cuv. & Val.

7. CEPHALACANThUS.

It appears to be reasonably certain that the small fishes which have received the name of *Cephalacanthus* La C. (iii, 323, 1802; *C. spinarella* L.) are the young of, or, at least, not generically different from, the Flying Gurnards (*Dactylopterus* La C. iii, 325). The name *Cephalacanthus* has two pages priority, and should in strictness supersede *Dactylopterus*. The application of the law of priority to different parts of the same work is often as important for the avoidance of confusion as its application to different works. The law of primogeniture applies to twins.

8. DIPTERODON.

The genus *Dipterodon* La C. (Hist. Nat. Poiss., iv, 165, 1803) is based on six species, mostly unrelated, belonging to *Lutjanus*, *Apogon*, *Aspro*, and *Sciema*. The first of this species, *D. plumieri*, is identical with *Lutjanus syngaris*, and the name may be considered as a synonym of *Lutjanus*.

The sixth species mentioned, "*Dipterodon chrysourus*," is evidently identical with *Sciema argyrochelena* (Mitch.), the second of the two species called "*Perca punctata*" by Linnaeus in the *Systema Naturae*. If the duplicated Linnaean name be restricted to the first species to which it was given (*Epinephelus punctatus*), the name *chrysoura* must take the place of *argyrochelena*, and the species stand as *Sciema* (*Bairdiella*) *chrysoura*.

The name *Dipterodon* has been used by Cuv. & Val. for a genus unknown to La Cépède. This transfer of the name is not allowable, and the *Dipterodon* C. & V. should receive a different name, that of *Coraciaceus* Gronow (1834).
9. CHÆTODIPTERUS.

Chætodipterus (iv., 503; Chætodon plumieri, Gmelin.) is correctly distinguished from Chætodon, by the separation of the dorsal fins. Its type is identical with Zeus faber Broussonet. The name Chætodipterus must therefore supersede Parethippus Gill, as Bleeker has already shown.

10. POMADASYS.

Pomadasys (iv. 515) is based on Sciana argentea Forskål, which is a species of Cuvier's genus Pristipoma, according to Günther and Cuvier. The generic description is not altogether correct, but is copied from the specific description of Forskål. The name Pomadasys must therefore take the place of Pristipoma, a change already made by Cantor and Bleeker.

11. CLUPANODON.

The genus Clupanodon was proposed by La Cépède (Hist. Nat. Poiss., v. 468, 1803) for those species of Clupea which had no teeth in the jaws, and with the following definition:

"Point de trois rayons à la membrane des branchies, le ventre carené; la carène du ventre dentelée ou très-aigus; la nageoire de l'anus séparée de celle de la queue; une seule nageoire sur le dos; point de dents aux mâchoires."

Six species are referred by La Cépède to this genus, viz:

thrissa (L.). (Opisthonema Gill.)
nasica Lac. (nasus Bloch). (Dorosoma Raf.)

pilchardus L. (Sardinia Poey.)
sinensis L. (Clupeonia C. & V.)
africanus Bloch. (Pellona, C. & V.)

jussieu Lac. (Clupeonia C. & V.)

One of these, Pellona africana, does not conform to the definition and should be excluded. All the others (except Dorosoma nasus) are very closely related, and are probably all representatives of sections of the genus Clupea rather than of distinct genera. The name of Clupanodon is prior to all of these and must take the place of one of them. So far as we know, it has never been formally restricted. It seems to us best to consider C. jussieui as the type of Clupanodon, and to substitute Clupanodon for Clupeonia.

12. GYMNOMURÆNA.

The genus Gymnomuræna La Cépède (Hist. Nat. Poiss., v. 648, 1803), was defined as follows:

"Point de nageoires pectorales; une ouverture branchiale sur chaque côté du poisson; le corps et la queue presque cylindriques; point de nageoire du dos, ni de nageoire de l'anus; ou ces deux nageoires si
basses et si enveloppées dans une peau épaisse, qu'on ne peut reconnaître leur présence que par la dissection."

Two species are mentioned, Gymnomuraena doliata La C. (=Echidna zebra (Shaw) Bleeker) and Gymnomuraena marmorata (=Murænoblenne marmorata), both of which agree fairly with the generic definition.

The first restriction of the genus Gymnomuraena is that of Kaup (Apodes, 1856, 103), in which zebra (doliata) is regarded as the type; and the group is recognized (probably correctly) as distinct from Echidna Forster (=Pacilophis, Kaup).

Later Dr. Günther (Cat. Fish, Brit. Mus., viii, 133, 1870) has restricted the name Gymnomuraena to the second species of La Cépède (marmorata). This arrangement seems to us not allowable. The first proper restriction must hold, and the name Gymnomuraena henceforth go with G. doliata.

13. MURÆNOBLENNA.

The group called by Dr. Günther Gymnomuraena should stand as Murænoblenne La Cépède (Hist. Nat. Poiss., v. 652, 1803). This genus is based on a single species, M. olivacea La C., and is defined as follows:

"Point de nageoires pectorales ; point d'apparence d'autres nageoires; le corps et la queue presque cylindriques ; la surface de l'animal repandant en très grande abondance, une humeur* laiteuse et gluante."

14. MACRORHAMPHOSUS.

The genus Macrorhamphosus La Cépède (v. 136) is based on Silurus cornutus Forskål=Centriscus scolopax L. In the tenth edition of the Systema Naturæ, Linnaeus refers to his genus Centriscus but one species, C. scutatus. This species should, therefore, properly be taken as the type of Centriscus (=Amphisile Cuv.), while the name Macrorhamphosus should be used for C. scolopax and its relatives, the group usually called Centriscus.

The following is a summary of the changes in nomenclature suggested in the present paper:

HIATULA La Cépède for Tautoga Mitchill.

GOBIOMORUS La Cépède for Philypnus Cuv. & Val.

CYPHOSUS La Cépède for Pimelepterus La Cépède.

MONODACTYLUS La Cépède for Psettas Cuv. & Val.

SCOMBEROMORUS La Cépède for Cybiun Cuv. & Val.

CEPHALACANTHUS La Cépède for Dactylopterus La Cépède.

SCIÆNA (BAIRDIELLA) CHRYSURA (La Cép.) Jor. & Gilb. for Sciaena (Bairdiella) argyroleuca (Mitchill), J. & G.

CHÆTODIPTERUS La Cépède for Parephippus Gill.

POMADASYS La Cépède for Pristipoma Cuv. & Val.

*Hence the name; "Blenna, en grec, signifie mucosité." (La Cépède.)
ON THE SYNONYM Y OF THE GENUS BOTHUS RAFINESQUE.

BY DAVID S. JORDAN AND CHARLES H. GILBERT.

In the Caratteri di Alcuni Nuovi Generi, etc., 1810, 23, the genus Bothus is established by Rafinesque for flounders, which are allied to the European turbot. Three species are referred to this genus: B. rumolo Raf., B. toppa Raf., and B. imperialis Raf. The first of these is, according to Bonaparte (Cat. Method. dei Pesci Europ., 1846, 49) identical with Pleuronectes rhombus L.; the third, with the Turbot Pl. maximus L., and the second has not yet, so far as we know, been identified. The relations of these fishes to the Linnaean Pl. rhombus seems to have understood by Rafinesque, who observes that he should have called the genus Rhombus, had not La Cépède removed the latter name to another genus. It will be, therefore, not unfair to take the first species mentioned by Rafinesque, and which is really identical with Pleuronectes rhombus L., as the type of his genus Bothus. A group substantially identical with this had been previously outlined by Klein under the name of Rhombus. This name was afterwards accepted by Cuvier for the Turbot and its relatives, and has now come into general use. If we adopt the pre-Linnaean and non binomial generic names proposed by Klein, as has been done by Bleeker, and formerly by Professor Gill, the name Rhombus must be used for this group. If we reject these pre-Linnaean names, as is now the custom of most writers, the Rhombus of Cuvier is antedated by Rhombus of La Cépède (= Peprilus Cuvier), and moreover, it is not the earliest name of the group in question.

In the Indice d' Ittiologia Siciliana, 1810, p. 53, a few months later than the "Caratteri," a genus "Scophthalmus" is thus defined: "Ale gingulari ed ale caudale sciolte, occhj alla sinistra."

Three species are referred to this genus (p. 14): Pleuronectes maximus L., Pleuronectes rhombus, L., and a new species based on an erroneous and indeterminable figure of Rondelet, which receives the name of Scophthalmus diurus. Rafinesque's genus Scophthalmus is therefore equivalent to his own Bothus, the sole difference between them being, according to Bonaparte (l. c., p. 49), that Bothus was founded on actual specimens ("ex natur") and Scophthalmus on the descriptions of others ("ex auct").

Later, as already stated, both these fishes, with others, received the