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A more particular description is not thought necessary, as the figure accompanying this article will convey a better idea of the animal than can be given by any verbal detail.

A new genus of Fishes, of the order Abdominales, proposed, under the name of Catostomus; and the characters of this genus, with those of its species, indicated. By C. A. Le Sueur. Read September 16, 1817.

The genus *Cyprinus* of Linne, included a considerable number of fishes, of supposed congenerous habits and conformation; and it has since his time been enlarged by important additions; hence it has become necessary to the advancement of the ichthyological student, to form new genera from this increasing family. Recently Mr. Cuvier proposed as the type of a subgenus, the *Cyprinus barbatus* of Europe; and notwithstanding this division, there still remains a species which will form the basis of another division, or of a separate genus. This was described and figured by Forster, under the name of *Cyprinus catostomus*; (Phil. Trans. vol. 63.) and is the only (certain) species of the kind recorded by La Cèpede, and Shaw. A second was described and figured by Mr. Peck, in the Memoirs of the American Academy of Arts and Sciences of Boston, vol. 2, part 2, p. 55, pl. 2, fig. 4, likewise under the name of *catostomus*. Dr. Mitchill, in the Transactions of the Newyork Historical and Philosophical Society, describes two species, one under the name of *oblongus*, and the other under that of *teres*, which last he conjectured might prove the *catostomus* of

Forster. But as far as I am enabled to determine, the whole four are specifically distinct.

Since the publication of the above, I have been made acquainted, by ocular testimony, with the existence of eleven (supposed) new species, of similar characters, which, with the above named four, will form a group of fifteen species. The common characters of these fifteen species are sufficiently striking to distinguish them from the rest of the Cyprinii; and would justify one, either in subdividing the genus, or, which would be more scientific, in creating a new genus, of which I here propose the establishment, under the name of *Catostomus*, the appellation which Forster gave to the species he described, and which was said to have been discovered at Hudson's Bay.

Genus CATOSTOMUS.

Characters.

Back with a single fin.

Gill-membrane three-rayed.

Head and *opercula* smooth.

Jaws toothless, and retractile.

Mouth beneath the snout, lips plaited, lobed,
or carunculated, suitable for sucking.

Throat with pectinated teeth.

The species which are here described are all possessed of the following general characters:

Body. The *body*, in general, is elongated, and varied in its form.

Scales. The *scales* in almost all the species are marked with radiated lines, and fimbriated on their edges; their form more or less rhomboidal, or roundish.

Gill-covers. The *gill-covers* are large, and composed of three pieces: the anterior piece small in some, as is exemplified in the *C. macrolepidotus*, and in others large, as in the *C. communis*; opening or expansion wide.

Nostrils. The *nostrils* are double on each side, and separated by a membrane: the largest aperture near the eye.

Eyes. The *eyes* in general are pretty large, a little oblong, without nictitating membrane, pupil black and roundish, irides yellowish, sometimes brown, as in the *C. gibbosus*.

Teeth. No *teeth* in the jaws: but those of the throat, on each side, are composed of a range of bones, generally blunt, and thick at their summits, placed in a pectinated form, on an osseous, arcuated base, of which they are a component part; and sometimes terminated in a hooked point, as in the *C. maculosus*: these teeth are enveloped in a thick mass of a whitish substance, which covers the throat, and supplies the place of a tongue.

Mouth. The *mouth* is generally lunated; to the palate is attached a membrane.

Viscera. The *intestinal canal* is very much developed, and it has its origin near the throat: the *stomach*, which is simple, and without plaits and curvatures, being a continuation of this canal, and appears to be confounded with it. The intestines make a number of circumvolutions; in a specimen of the *C. macrolepidotus*, of sixteen inches long, they were three feet five inches in length. The *liver* is deliquescent, and soon passes into oil after exposure to the atmosphere. The *air-bladder* is subcylindric, and divided, in most species, into two parts; in the *C. macrolepidotus* it is separated into four parts. I have remarked

M. Kerstan Del. mas. & imp.

SCIENTIA



in the intestines of these fishes, river shells of the genera *Lymnæa*, *Bulimus*, &c. which dwell on aquatic plants, and on the rocks at the bottoms of rivers: these shells the *Catostomii* are enabled to take with their lips, which are protruded forward by means of their jaws.

It is necessary to remark, that in all the species, which I have examined, there is a line which runs from the nape, beneath the eyes, and another along the head, above the eyes, of small orifices, for the passage of mucous; which lines are well defined after the fish is dead and desiccated, but not so conspicuous when recent: these lines Forster improperly terms sutures. I will add, that some species, in a dried state, have also a tuberculated appearance on the head, which tubercles are not discernible when the animals are living.

Observation. These fishes are not in general estimation, the flesh of the major part being soft and insipid. The *C. Cyprinus* appears to be more valued than the rest; it becomes very fat, and is common, at certain seasons, in the markets of Philadelphia. Their habits, and the mode of taking their food, preserve them from being taken with the hook, in common, though it is said that some of them may be thus caught by the allure of a peculiar bait; those which are brought to market are taken in seines, but they are not the object of a particular fishery. Some of the species are seen in market the whole year; and others are only brought in September, November, and the beginning of spring. In the winter, the greater part retire to deep water.

1. *CATOSTOMUS Cyprinus*. *Body* compressed, elliptic, sharp at the base of the *dorsal fin*, which is very long, and falciform on its anterior part, and low behind.

Head declivous; *snout* short, rounded, projecting beyond the jaw; *anal fin* lunated; *caudal fin* forked, with pointed lobes; *pectoral* and *anal fins* small; all the fins of a gray-blue colour; *eyes* somewhat oblong; the *scales* are very large, semirhomboidal, and variegated with blue, yellow and green reflections; the *lateral line* has its origin near the upper part of the operculum, and passes down the centre of the body: *lips* a little less developed than in the remainder here described.

P. 18.—D. 31.—V. 9.—A. 10.—C. $18\frac{4}{7}$ rays.

This is the stoutest species of the genus yet known: it arrives to the length of twenty inches. Its vulgar appellation is *Carp*, a name which I have preserved, in consequence of its resemblance to the Common Carp of Europe. Inhabits the fresh water tributary streams of the Chesapeake Bay, particularly Elk river, which supplies the markets of Philadelphia.

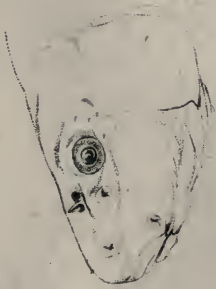
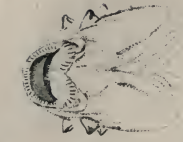
2. *C. gibbosus*. *Back* elevated in front of the *dorsal fin*, which is almost as high as broad, and rounded; *anal fin* bilobated.

Head nearly as high as long; *snout* short, roundish; *tail* strait; *caudal fin* semilunated, lobes roundish, the inferior one longer than the upper; *scales* very much crowded, transversely, a short distance from the opercula, but more developed on the rest of the body; the colour of the *back* is a deep blue, with golden reflections; *pectoral*, *ventral* and *anal fins* of a fine reddish orange colour; *caudal fin* tinted with carmine and violet; *dorsal fin* bluish green; abdominal *scales* red at their base; *lateral line* hardly perceptible; *body* marked with four or five taint, transverse bands. Length of specimen eleven inches.



C. GIBBO SITS.





C. TUBERCULATUS.

C. H. SEBASTIAN D. & SCULP.

P. 16.—D. 17.—V. 9.—A. 9.—C. 18 rays.

This species I discovered in the river Connecticut, near Northampton, where it is named Chub Sucker.

Dr. Mitchill's description of the *Cyprinus oblongus* approaches to this; but there are important characters in my species, not noticed in that of the former, which preclude a conclusion that they are the same; therefore, as the matter now stands, I must consider the above a nondescript.

3. *C. tuberculatus*. *Snout* furnished with three tubercles, placed in a triangular form, on each side; *caudal fin* lunated, lobes rounded and equal.

The *body* of this species resembles much that of the preceding, but it is less elevated on the *back*, and more thick; the *scales* are more equal, are more rounded on the back, and do not crowd on each other near the opercula, as in the preceding; *body* with seven or eight faint transverse bands; *back* of a bluish brown colour, *sides* yellowish or cream colour, *abdomen* whitish; all the *fins* brownish; above the *anal fin*, the tail is more inflated than that of the *gibbosus*. Length of specimen five inches.

P. 16.—D.—15.—V. 8.—A. 8.—C. 18 rays.

The existence of this remarkable species was first made known to me by Mr. Titian Peale, the youngest son of Mr. Charles Wilson Peale, the venerable proprietor of the old Philadelphia Museum: a young gentleman whose zeal in the study of Natural History does him much honour. It inhabits the small inland streams of Pennsylvania. The individual described was taken at the country seat of Mr. C. W. Peale, situated near German-

town, within six miles of Philadelphia, and presented to me by my friend Mr. Ord.

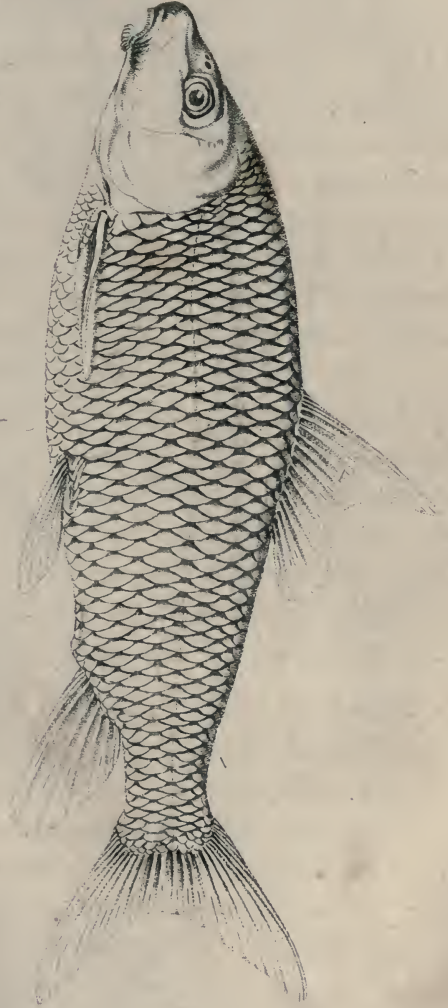
I have since seen a fish which resembled the above, but it wanted the snout tubercles. Perhaps it may be the opposite sex. On this question I am not at present prepared to decide.

After the foregoing description was in type, I had the satisfaction of meeting in the market of Philadelphia, several large specimens of this species, one of which I procured, and it measured from the end of the snout to the extremity of the caudal fin twelve inches, three inches deep at the base of the dorsal fin, and one inch and a half in thickness; its scales were distinctly radiated, and reflected brilliant iridescent colours, resembling those of the neck of some varieties of the house Pigeon; the colour of the pectoral, abdominal and anal fins was of a pale orange; the bands, which in the first described individual were distinct, were hardly perceptible in the present; the snout tubercles appeared to have fallen off, leaving a pale spot, encircled with brown, and a larger ring of yellow; irides brown, pupil black surrounded with a reddish ring.

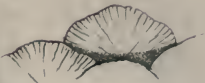
P. 16.—D. 15.—V. 9.—A. 10.—C. $18\frac{1}{4}$ rays.

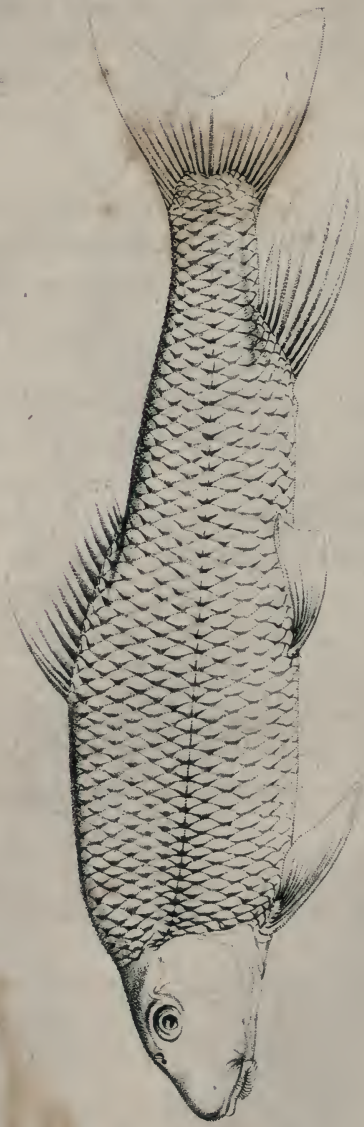
4. *C. macrolepidotus*. *Dorsal fin* short, greatly hollowed, upper lobe elevated and pointed, lower lobe rounded.

Body a little compressed and fusiform, elevated on its anterior part, rounded near the nape; *head* somewhat declivous, and longer than deep; *anal fin* strait, long, and passing the base of the *caudal*; *pectoral* and *abdominal fins* small; *caudal fin* forked, with pointed lobes, and of a gray colour; *dorsal*, *anal* and *ventral fins* tinted with blue and yellow; *scales* large, and disposed in a lozenge form; colour



C. MACROLEPIDOTIS





C. AIRIOLUS

Ch. Robinson Delic'd 8. 1809

of the *back* dark blue, base of the scales brown; *sides* whitish, with yellow reflections; *opercula* yellowish; *head* reddish brown; the *lateral line* rises at the nape of the neck, descends along the gill-cover, and thence to the tail in a line with the centre of the eye. Found in the river Delaware.

P. 18.—D. 16.—V. 9.—A. 9.—C. $18\frac{5}{7}$ rays.

5. *C. aureolus*. *Anal fin* long, pointed, and passing considerably beyond the base of the *caudal fin*, which is forked, with pointed lobes, the inferior of which is the largest; *abdominal fin* truncated.

Body subcylindric, elevated at the nape; *head* quadrangular, gibbous above the eye, almost as high as long; the rays of the anal fin are very strong and large; *scales* rhomboidal, equal; *body* of a beautiful orange colour, which is deepest on the back, the base of the scales dark red; the *sides* are heightened with golden reflections; *pectoral*, *ventral* and *anal fins* of a fine red orange, *caudal fin* of a deep carmine colour—the *dorsal fin* is paler than the rest; the *lateral line* is nearly straight, and commences in a line with the eye. Length of individual described sixteen inches, its depth three inches, and its thickness two inches and a half.

P. 18.—D. 14.—V. 9.—A. 8.—C. 18 rays.

This beautiful species I discovered near Buffalo, on Lake Erie.

6. *C. communis*. *Dorsal fin* quadrangular; *anal fin* narrow, and extends as far as the base of the *caudal fin*, which is somewhat lunated, with rounded lobes, the inferior lobe rather the longest; *eyes* situated nearer the posterior part of the opercula than the tip of the snout; *mouth* very large.

Body subcylindric; *snout* and *head* more lengthened than those of the foregoing; *head* depressed; *scales* roundish, regular, of a medium size; general colour of the head and back a reddish brown, in some specimens darker than in others; *sides* reflecting golden tints; *abdomen* whitish; *pectoral*, *ventral* and *anal fins* reddish brown; *caudal fin* of a reddish violet colour; *dorsal fin* blue and yellow; the *lateral line*, after its base curve, descends to the tail below the parallel of the centre of the eye. Length of specimen sixteen inches.

P. 18.—D. 14.—V. 10.—A. 9.—C. 24 rays.

This species is taken in the Delaware, and is very common in the markets of Philadelphia. The fishwomen commonly exhibit them to sale in bunches, strung on the pliable branches or twigs of the Willow. As an article of food they are not esteemed, and they generally fall to the lot of the poor.

(To be continued.)

It is with pleasure that we acknowledge our obligations to Mr. Le Sueur for the plate, No. 4, which accompanies the present number.

The figures from 1 to 6 are referred to in Mr. Say's account of the Crustacea of the United States; the remainder will be here explained.

Fig. 9, represents the *Cerapus tubularis*, in its tube, of the natural size.

Fig. 7, the same magnified.

Fig. 8, the animal, divested of its habitation, magnified.

Fig. 10, a foot of the second pair.

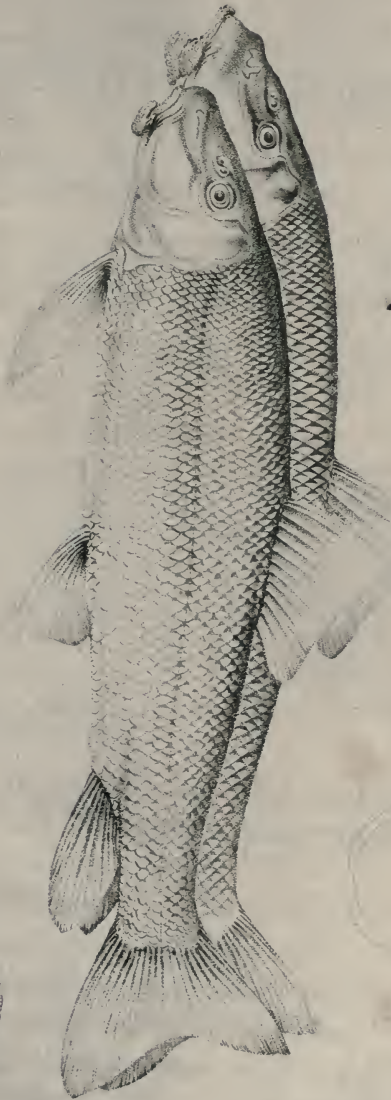
Fig. 11, the tail.

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C. P. Addison del. J. G. Cooper sculp.

C. GOMPHINIS.



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No. 6.

OCTOBER, 1817.

VOL. I.

*An Account of the Crustacea of the United States. By
Thomas Say. Read October 7, 1817.*

(Continued.)

Since the preceding part of this paper was put to press, Captain James Hamilton presented to the Academy several crustaceous animals collected by himself in the Gulf Stream; amongst these were some specimens of *Lupa pelagica*, of which I have inserted a description in order to exhibit the difference between it and the *L. hastata* which it resembles considerably.

LUPA pelagica. *Clypeus* four-toothed; third joint of the anterior feet four-spined; *carpus* two-spined; *hands* ciliated on the interior upper edge.

Inhabits the Gulf-Stream.

Portunus pelagicus. *Fabr. and Latr.*

Thorax variegated, with minute granulæ; seven of the lateral teeth equal, equidistant, one at the posterior canthus of the eye larger, posterior tooth much larger, spiniform; *clypeus* four-toothed, and the anterior canthus of the eye elevated, the two middle teeth rather smaller, third

A new genus of Fishes, of the order Abdominales, proposed, under the name of Catostomus; and the characters of this genus, with those of its species, indicated. By C. A. Le Sueur. Read September 16, 1817.

(Concluded.)

7. *C. longirostrum.* *Dorsal fin* deeper than broad, quadrangular; the extremity of the *anal fin* does not reach the base of the *caudal fin*; *head* horizontal, terminated in a long snout

Body subcylindric, strait, delicate; *head* flat; *eyes* large, *irides* yellowish white; aperture of the mouth greatly arcuated, and large; *scales* very small and roundish; colour of the *body* above reddish, paler on the *sides*; *abdomen* white, with a bluish tint; the *lateral line* is curved above the pectoral fin. Length of individual described five inches.

P. 16.—D. 12.—V. 9.—A. 7.—C. 18 rays.

This fish I discovered in the state of Vermont; I have not seen it in any other state.

8. *C. nigricans.* *Head* large, quadrangular; *anal fin* strait, its extremity reaching the base of the *caudal fin*; *eyes* oblong: the *lateral line* runs in a straight course from the branchial opening, below the range of the eye, to the tail.

Body subquadrangular near the head; *tail* strait, short; *caudal fin* forked, with pointed lobes; *dorsal fin* quadrangular, and small; *scales* roundish; colour of the *back* blackish, *sides* and *abdomen* reddish yellow, with dusky blotches; *pectoral, abdominal, and anal fins* reddish; *caudal fin*

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C. ELONGATUS

C. A. Leisner Des. & Sculp.

and *dorsal fin* dashed with black. Length of specimen described thirteen inches.

P. 18.—D. 11.—V. 9.—A. 8.—C. 18 rays.

I discovered this new species in Lake Erie, where it is known by the names of Black Sucker, and *shoemaker*.

9. *C. maculosus*. *Head* large, quadrangular, declivous; *eyes* small, roundish; the *lateral line* is straight, and runs from the operculum in a line with the eye.

The *head* in this species is more pointed, the anterior part of the body thicker, the posterior part straiter, the *tail* longer, the *dorsal fin* larger, and more elongated, than those parts of the *C. nigricans*; the *caudal fin* is also larger, but the *anal fin* is shorter, than in the last; the *scales* are roundish; colour of the *body* reddish, with irregular blotches of black; *pectoral* and *ventral fins* reddish, dashed with black; *anal fin* and *caudal fin* reddish white; *dorsal fin* bluish, with black marks on the rays. Length of specimen eight inches.

P. 16.—D. 12.—V. 9.—A. 9.—C. 18 rays.

This fish is likewise called Black Sucker. I discovered it in Pipe-Creek, Maryland. Perhaps it may be only a variety of the *C. nigricans*; but as there is a considerable difference observable between them, I have ventured to arrange it as a distinct species.

10. *C. elongatus*. *Body* subcylindric, very long; *dorsal fin* very long, low, its anterior part high, and falciform.

Head very small, cuneiform above, breadth between the eyes one inch and a half; *snout* strait, round, and furnished, as are likewise the *opercula*, with small tubercles; *pectoral fins* as long as the head, placed very low; *abdo-*

minal fins almost as long as the pectoral; *anal fin* very small and truncated; *caudal fin* large and bifurcated, with pointed lobes; the *dorsal fin* is about one third the length of the whole animal; *scales* large, flexible on the flanks, and a little quadrangular towards the tail; *lateral line* almost straight; the skin beneath the great rays of the pectoral fins is callous.

In an individual of two feet long, the head measured three inches to the tip of the snout. The colour of the specimen described could not be ascertained, in consequence of its being in a dried state: it forms a part of the collection of the Academy of Natural Sciences of Philadelphia.

P. 16.—V. 10.—D. 32.—A. 8.—C. 18 rays.

With the exception of the *C. Cyprinus*, this is the largest species that I have seen. It was discovered in the river Ohio, by Mr. Thomas Say.

11. *C. vittatus*. A black stripe passes from the snout, through the eye, to the caudal fin, dividing the body equally; *dorsal fin* quadrangular; *tail* forked.

Body very small, slightly compressed, elevated in the centre above; *back* pale yellowish red, *abdomen* and *lower fins* white; *mouth* small, lower *lip* very easily protruded forward, as if by means of a spring, when the animal takes its food; *scales* very small, rounded. Length of specimen two inches.

P. 16.—D. V. 9.—A. 8.—C. 18 rays.

This remarkable little species was found in Wissahickon Creek, near Philadelphia, by Reuben Haines, corresponding Secretary of the Academy of Natural Sciences.



C. DUQUESNE

12. C. *Duquesnii*. Head large and long; mouth wide; scales large, subtrilobate: dorsal fin quadrangular; the anal fin extends as far as the base of the caudal fin, which is greatly forked; lateral line arched at the centre of the body.

Body long, a little compressed: snout strong; the mouth is furnished with thick, plaited, and very large lips; pectoral fins pretty large; the scales are strong, greatly radiated, and as wide again as long—they are of nearly an equal size on the whole body; the lateral line forms a long curvature towards the back; lobes of the caudal fin pointed, the upper lobe somewhat the largest; length from the snout to the extremity of the caudal fin nineteen inches; depth three inches and a half; thickness two inches; the head measures about one fifth part of the whole fish.

P. 17.—D. 14.—V. 10.—A. 9.—C. $18\frac{4}{5}$ rays.

This new species is so strongly marked that it will be easily distinguished from the foregoing.

It inhabits the Ohio; and was discovered at Pittsburg, the ancient Fort Duquesne, by Mr. Thomas Say.

It was not until the publication of the first part of this Monograph, that I noticed the above described specimen in the collection of the Academy of Natural Sciences of Philadelphia.

Of the above twelve species, and likewise of the *Bostoniensis*, I have drawings; and part of them are already engraved for my projected work on the Fishes of the United States of America. But in order to facilitate a comparison of those species described by others with mine; and chiefly to incite to a re-examination of the subjects themselves, I have concluded to append to this paper the descriptions which follow. The reader by this means will

have at one view before him all the American* species, hitherto ascertained, of this new genus. Hence my paper assumes the character of a *Monograph* of the *genus Catostomus* of North America.

13. *C. Bostoniensis*. *Caudal fin* greatly forked, lobes equal and pointed; *mouth* very small, lunated; the *lateral line* proceeds, with a regular curve, from the nape to the tail.

This species has a great resemblance to the common sucker of the Delaware, *C. communis*, in the form of its body, but it is somewhat shorter; and its very forked tail, with equal lobes, distinguishes it from that species; the *scales* are round, equal, and smallish on the back, near the nape; the *back* is of a reddish brown colour, (in some specimens darker than in others) as is likewise the *head*; the *sides* and *abdomen* are whitish; *pectoral*, *ventral*, and *anal fins* of a reddish yellow colour; *eyes* large, roundish, and placed about midway between the posterior part of the gill-covers, and the end of the snout; the *anal fin* is pointed, and runs to the base of the *caudal fin*.

P. 18.—D. 13.—V. 10.—A. 9.—C. 18 rays.

This fish inhabits the waters of Massachusetts, in the neighbourhood of Boston. I obtained my specimen in the Boston market.

On mature reflection, I have concluded that this is the species described and figured by Peck, as before stated, though this author is censurable for intermingling Forster's description with his own. But I cannot join Mr. Peck in

* I say American, for it is doubtful whether two or three foreign species may not be classed with this genus.

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E. A. Silliman, del. Wm. Silliman, sculp.

O. BOSTONIENSIS.

the determination of the identity of the *catostomus* and his Piscataqua fish.

14. *C. Hudsonius*. Cyprinus Catostomus. Pinna ani radii 8; labio imo caruncula bilobata papillosa, cauda bifida.

Pinnæ D. 12.—P. 17—V. 10—11.—A. 8.—C. 17.

Habitat in Sinus Hudsonis fluminibus copiose, sugendo pascitur.

Anglis the *Sucker*. Royal Society Trans. vol. 63, page 155, tab. 6.

Head broader than the body, gradually decreasing towards the nose, full of elevations and tubercles, nearly quadrangular; *mouth* not far from the extremity of the snout; *eyes* large; on the *snout* are about five round prominent tubercles; the *head* has several sutures; over each eye, in a cavity, are two longitudinal sutures, joined opposite the nostrils by a still shorter transverse one; on the covers of the gills are two, on each side one, beginning near the lobes of the caruncula of the under lip, and going up arched towards the eye. Near the extremity of the snout begins on each side a longitudinal one; it passes under the eye, and mounts in a curvature behind it, then it goes straight to the end of the head, where it again gets downwards, and joins the lateral line; the *scales* are small near the head and back, increasing in size towards the middle and tail, close to which they are again smaller; *dorsal fin* rhomboidal; *pectoral fins* lanceolated, fixed under the covers of the gills, and measure in length a fourth part of the fish, estimated from the setting on of the head to the base of the caudal fin; body pale silvery; *caudal fin* concave or lunated. Length sixteen inches.

Weighs about two pounds and a half. Not deemed a palatable food.

This is the description of the first species, which was made known to naturalists, of the present genus; extracted from the sixty-third volume of the Transactions of the Royal Society of London. I have never yet seen a fish to which Forster's description would apply; and I do not hesitate to assert that this species is distinct from all those recorded in this Monograph. It possesses a remarkable character in its long pectoral fins, which are longer than those of any of my species, with the exception of the *elongatus* of the Ohio.

15. *C. teres*. Fresh-water Sucker. (*Cyprinus teres*.) With elongated round body. Low, soft, puckered mouth, and tail nearly even.

Mouth under, toothless, and with a soft and puckered orifice. Head rather small. Back thick and round, (*cylindrically*.) Back and sides a speckled black and white. Belly whitish. Pectoral, abdominal, and anal fins yellowish. Dorsal and caudal dark brown.

Lateral line straight. Abdomen large and frequently flabby. Rays of the fins coarse. Tail almost even.

Inhabits fresh brooks, ponds, and rivers, and in many of them is taken very abundantly. Grows to the size of twelve and fifteen inches. Is, perhaps, the *C. catostomus*.

The swimming bladder is divided into two sacks or cells, having connection by a small tube.

P. 17.—V. 9.—A. 8.—D. 13.—C. 19 rays.

16. *C. oblongus*. Chub of Newyork. (*Cyprinus oblongus*.) Mouth under, small, puckered, and toothless.

Head somewhat depressed and smooth. Eyes rather small. Gill-openings rather narrow. Pectoral fins very far forward on the neck. Back arched, and approaching to gibbous. Body thick, but may be rather termed deep than round.

Back deep brown, inclining to black, with whitish scales. The lines between the scales, dark and decussating each other so as to leave rhombic spaces between them. The lines are darker coloured than the spaces they define.

Belly a pale cream colour, with golden spots or tints, particularly between the pectoral and ventral fins, and near the anal.

Pectoral and ventral fins dusky, with a reddish tinge, anal, caudal, and dorsal, dark brown.

Lateral line obscure. Tail rather concave.

P. 15.—V. 9.—D. 14.—A. 8.—C. 19 rays.

Lives in fresh streams and lakes, like the Sucker.

These two last descriptions are extracted from an account of the Fishes of Newyork, by Samuel L. Mitchill, M. D., published in the Transactions of the Literary and Philosophical Society of Newyork, 1815.

17. *C. sucetta*. (*Cyprinus sucetta*. La Cépède.) Head compressed and flat; the opening of the *mouth* semi-circular; lower *lip* very thick, crenated, and curved outwardly; *body* and *tail* compressed; *scales* semirhomboidal; *irides* yellow; *fins* and *back* of a brown colour; *sides* silvery, with brown spots at the base of the scales.

P. 13.—D. 12.—V. 9.—A. 9.—C. 18 rays.

In the introduction to this article, I asserted that the *C. catostomus* is the only (certain) species of the kind

recorded by La Cépède. On a review of the extensive and valuable work of this celebrated author, to whom science is so much indebted, I have found that I was in error, and I hasten to publish my acknowledgment. The description of the *C. sucetta* was taken from the manuscripts of Monsieur Bosc, formerly Consul of France at Charleston, South Carolina. This species is said to be very common in the rivers of South Carolina; it seldom arrives to the length of four *décimètres*, or about two feet; and it is not an esteemed food.

ADDENDA.

In the cabinet of the Academy of Natural Sciences, there is a specimen of *Catostomus* which approaches in its form to the *C. Cyprinus* of the Chesapeake. It differs from the last mentioned in its *gill-covers*, which are stronger; in its *back*, which is a little less elevated; in its *dorsal fin*, the two first rays of which are longer than the total length of the fin, and extend as far as the base of the caudal fin.

This individual resembles in its other parts, and also in the number of the rays of its fins, the Chesapeake species. According to the observation of Mr. T. Say, who discovered this fish in the Ohio, and who examined and prepared two recent specimens, the colour was the same as that of the *C. Cyprinus*.

The difference, noted above, which exists between the *Catostomi* in question, does not appear sufficient to authorize me to record them as distinct species, though I must admit that the uncommon length of the first rays of the dorsal fin, of the Ohio fish, if universal, would suggest a specific discrimination. They certainly have a

very close affinity to each other; both are accounted good food; and attain to about the same size.

In the early part of the present month, I procured several individuals of the *C. macrolepidotus*, in the markets of Philadelphia; they had not the dorsal fin hollowed, but it was raised in a point before, and truncated in a very oblique line, which diminished the fin towards its posterior part. One of these specimens was a male, and it did not differ in other respects from the specimen described, No. 4 of this article, which I omitted to mention was a female. This additional notice is necessary, in order to put the naturalist on his guard when he turns his observation on this species.



An account of two new genera of Plants, and of a species of TILLÆA and LIMOSELLA, recently discovered on the banks of the Delaware, in the vicinity of Philadelphia. By Thomas Nuttall. Read September 16, 1817.

In July last, while collecting specimens, near Kensington, of the *Isoetes lacustris* which grows so abundantly on the mirey and gravelly banks of the Delaware, subjected to the flowing of the tide, I happened, almost inadvertently, to discover a very small succulent plant, somewhat resembling a *Sedum*, which on examination, proved to be a species of *Tillæa*. I at first, as well as my friend Mr. Collins, supposed it to be the *T. connata* of the Flora Peruviana, but on examining the plate, and description in that