

IDENTITY OF A SUPPOSED WHITEFISH, *COREGONUS*  
*ANGUSTICEPS* CUVIER & VALENCIENNES, WITH  
A NORTHERN CYPRINID, *PLATYGOBIO*  
*GRACILIS* (RICHARDSON)

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To Cuvier and Valenciennes<sup>1</sup> is credited a name interrogatively applied by Valenciennes to a fish represented in a drawing made by himself. He supposed that it was a salmonoid, but was uncertain regarding the genus, and at the end of his description hesitatingly asks if it might not be called *Coregonus angusticeps*.

If the drawing was puzzling to Valenciennes, his description has been no less so to subsequent ichthyologists, who, while accepting it as applying to a *Coregonus* have been uncertain what species should bear the name or to what the synonymy should be assigned.

In the general ichthyological works since Cuvier and Valenciennes, it has been but briefly or doubtfully referred to or omitted entirely. Günther<sup>2</sup> mentions it in a footnote as known from a figure only and as one of the species so imperfectly described as to be worthy of only passing notice.

Jordan and Gilbert<sup>3</sup> do not notice it, while Jordan and Evermann<sup>4</sup> have placed it in the synonymy of *Coregonus labradoricus*, although with doubt. This disposition of it has been followed by Evermann and Smith<sup>5</sup> and by Evermann and Goldsborough.<sup>6</sup>

Regarded as a whitefish, notwithstanding the fact that the description, which was stated to be "brief and erroneous," did not fit the species, this perhaps was a natural conclusion for two reasons: Because the original description of *Coregonus angusticeps* appears

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<sup>1</sup> Histoire Naturelle des poissons, XXI, 1848, 534.

<sup>2</sup> Catalogue of the Fishes in the British Museum, VI, 1866, 172.

<sup>3</sup> Synopsis of The Fishes of North America. <Bull. 16, U. S. Nat. Mus. 1882 (1883).

<sup>4</sup> Fishes of North and Middle America. <Bull. 47, U. S. Nat. Mus., part 1, 1896, 466.

<sup>5</sup> The Whitefishes of North America. <Rept. U. S. Fish. Comm. 1894 (1896), 302.

<sup>6</sup> A Check List of the Freshwater Fishes of Canada. <Proc. Biol. Soc. Washington, XX, 1907, 100.

with the description of *Coregonus labradoricus*<sup>1</sup> almost as though it were continuous with the brief description of that species; and because the Saskatchewan River, from which the fish came, belongs to the Hudson Bay drainage, in the eastern portion of which, at least, *Coregonus labradoricus* was supposed to be the most common species of whitefish.

Recent investigations by the present writer, however, show that the description of "*Coregonus angusticeps*" is erroneous only in its erroneous application, and that the mysterious fish is not a whitefish at all, but a very common cyprinid of the far north, now known as *Platygobio gracilis* (Richardson).

A careful consideration of Valenciennes's description of *Coregonus angusticeps* shows that this fish, with so few scales in a longitudinal

<sup>1</sup> "La Coregone du Labrador (*Coregonus labradoricus*, Richardson).

"Je ne connais aussi ce poisson que d'après M. Richardson. Il se rapproche du précédent par ses mâchoires et son palais sans dents, et par les quatre rangées qui sont sur la langue.

"Il en diffère, parce que le museau est tronqué et que la mâchoire supérieure me paraît plu longue que l'inférieure. Les écailles sont orbiculaires et disposées par rangs. L'espèce ressemble en général au *Coregonus quadrilateralis*. Les nombres sont :

"D. 15; A. 15; C. 35; P. 15; V. 11 ou 12.

"Ce poisson vient de la rivière Musguaw, qui se jette dans le golfe Saint-Laurent, près de l'île Mingan.

"Lorsque nous connaissons mieux cette espèce et la précédente, si les naturalistes les réunissent pour en former un genre particulière nous retrouverons en lui les deux sections que nous avons signalées dans nos Corégones.

"Parmi les dessins que j'ai faits des poissons que nous a communiqués M. Richardson,

"J'en trouve un aussi remarquable par la petitesse de sa tête que par la singulière disposition de sa bouche. La longueur de la tête est du sixième de la longueur totale, tandis que la hauteur du tronc n'y est comprise que cinq fois et quelque chose. La hauteur de la tête, prise à la nuque, mesure la moitié de sa longueur, et l'ouverture de la bouche est due tiers de cette même tête. La pectorale est longue et pointue : elle atteint presque jusqu'à la ventrale. L'anale est presque aussi haute que la dorsale. Les écailles sont de moyenne grandeur : il y en a cinquante-cinq dans la longueur et quinze dans la hauteur. Chacune d'elles est ciselée de huit à dix stries fines et rayonnantes.

"D. 10; A. 10; C. 10; P. 16; V. 8.

"Ce poisson est appelé parles naturels *Nat-chee-gas*. Il a été pêché dans la rivière de Saskatchewan [*sic*]. L'individu est long d'un pied.

"C'est un curieux poisson que je ne retrouve pas cité dans l'ouvrage de M. Richardson. Je n'ose donner de nom à ce Salmonoïde, parce que je ne puis pas assez préciser la forme des dents, des mâchoires et par conséquent fixer d'une manière assez certaine le genre. Ma première impression avait été cependant d'en faire une Corégone puisque j'avais placé ce dessin à côté des autres espèces du même genre. On pourrait l'appeler *Coregonus angusticeps*?"

series, could not be a whitefish, much less any other salmonoid. This character suggests a cyprinid or a Catostomid, but the character of the mouth precludes the latter. According to Valenciennes, the drawing upon which the description was based was made from a specimen from the Saskatchewan River furnished by Richardson.

The only cyprinid recorded from the Saskatchewan by Richardson<sup>1</sup> is his "*Cyprinus (Leuciscus) gracilis*," of which he gives a full description and an excellent plate figure. In the following comparison of the essential features given in Valenciennes's account with the corresponding characters shown in Richardson's description and figure, it will be seen that they almost exactly agree:

Val.—Remarkably small head.	Rich.—Small head.
" Head $\frac{1}{6}$ total length.	" Head 5 in length to tip middle rays of caudal.
" Depth of body something over 5 in total length.	" Depth of body 5 in length to tip middle rays of caudal [from figure].
" depth of head, measured from nape, $\frac{1}{2}$ its length.	" Depth of head a little more than $\frac{1}{2}$ its length [from figure].
" Length of mouth $\frac{1}{3}$ head.	" Length of mouth slightly less than $\frac{1}{3}$ head [from figure].
" Pectoral long and pointed, almost reaching ventral.	" Pectoral long and pointed, extending a little over $\frac{2}{3}$ the distance from its origin to base of ventral [from figure].
" Anal almost as high as dorsal.	" Longest dorsal ray 1 inch and 10 lines; longest anal ray 1 inch and 7 lines.
" Scales moderate, 55 in length.	" Scales large, 55 in length.
" Fifteen scales in cross-series.	" Seventeen scales in cross-series [only 15 shown in figure].
" Scales grooved with 8 or 10 radiating striæ.	" Scales with 10 or 12 fine streaks radiating from the center.
" D. 10; A. 10; C. 19; P. 16; V. 8.	" D. 9; A. 10; C. 19; P. 16; V. 8.
" Length of specimen 1 ft.	" Length 12 inches and 2 lines.
" Native name, Nat-Chee-Gæs.	" Cree Indian name, No-nathchee-gæs.

The evidence presented by this strikingly close agreement in details justifies the belief that Valenciennes had before him a drawing of the above-mentioned cyprinid of Richardson. Further evidence is

<sup>1</sup> *Funa Boreali-Americana*, III, 1836, 120, pl. 78.

found in Richardson's work (loc. cit.), where he says "our specimen having been submitted to the inspection of Baron Cuvier, was returned, with the following note attached to it: 'Espèce particuliere de Cyprin voisin de notre *Cyprinus microcephalus*.' "

This specimen was therefore sent to Cuvier and returned with his or Valenciennes's diagnosis prior to the publication of the first volume of the *Fauna Boreali-Americana* (1836). It seems not improbable, then, that the drawing was made from this specimen some 10 or 12 years before Valenciennes made the description of "*Coregonus angusticeps*," which was published in 1848, and that after so long a time the subject of his drawing was forgotten and he did not recognize the strange fish therein represented, which elicited the remarks and hesitating description quoted in footnote<sup>1</sup>, page 96. But to some it will doubtless seem improbable, and even impossible, that an ichthyologist of Valenciennes's attainments should not detect that such a fish, even represented in a drawing only, having so few longitudinal scales and other unsalmonlike peculiarities, was not a *Coregonus*. Moreover, in volume XVII, 1844, p. 324 (*Hist. Nat. Poiss.*), there is a description of "*Leuciscus gracilis*" copied from Richardson's work and a reference to Richardson's "very pretty" figure of it, while, also, Valenciennes explicitly states in the description of *C. angusticeps* that he does not find it mentioned in Richardson's work.

But the fact that he did not find it mentioned by Richardson indicates that something was amiss; for Richardson would hardly have omitted such a "remarkable" species, especially one concerning which he considered it necessary to seek the opinion of Cuvier and Valenciennes. That Valenciennes did not find the fish mentioned in *Fauna Boreali-Americana* may possibly be accounted for by assuming that, his attention being concentrated mainly on the head parts, as the original description suggests,<sup>1</sup> he overlooked the above-mentioned discrepancies, and, prepossessed by the idea that it was a salmonoid from its superficial resemblance in form, he searched only among the Salmonidæ for its citation in Richardson's work.

A tracing of the original drawing of Valenciennes, made by a very experienced draughtsman connected with the *Museum d'Histoire Naturelle* and very kindly furnished by Prof. Leon Vaillant, conclusively proves that no other fish than the previously mentioned cyprinid could have been the subject of the drawing, notwithstanding the fact that the drawing shows an adipose fin, for the

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<sup>1</sup> J'en trouve un aussi remarquable par la petitesse de sa tête que par la singulière disposition de sa bouche.

form of the head and mouth parts and the fins are diagnostic, aside from the characters mentioned in the description.

In a letter accompanying the tracing, Professor Valliant says that it is not to be doubted that the resemblance between the fish represented in Valenciennes' drawing and that of Richardson's plate of *Leuciscus gracilis* is striking, and were it not for the adipose dorsal one would not hesitate to consider them identical. But, he continues, it is not difficult to admit that Valenciennes may have added the fin afterwards.

Professor Vaillant further suggests that, while Valenciennes was a very skillful and conscientious draughtsman, it is possible that he may have been deceived by some accident which happened to the specimen that he had before him.

Either of the above suggestions may be the true explanation of the erroneous presence of the adipose fin in the drawing; which is the more probable is hard to say.