

## THE PRESIDENT'S ANNIVERSARY ADDRESS.

THE appearance in the last volumes of the R. Swedish Academy of Sciences of two papers \* descriptive of such Linnean type-specimens of Birds, Amphibians and Fishes as are still preserved in the Zoological Museums of Upsala and Stockholm, has reminded me that the Linnean Society possesses also a number of Fishes from Linné's private collection, many of which have served as types or cotypes for the species enumerated in the 'Systema Naturæ,' and which have never been catalogued.

It is many years ago since my attention was first drawn to the existence of this collection by that devoted servant of the Society, Richard Kippist; unfortunately too late to allow me to make due use of it for my 'Catalogue of Fishes in the British Museum,' which at that time (1862) had been advanced to the fourth volume. I was, however, able to identify some of Linné's *Pleuronectidæ*. There the matter rested, until the year of the International Fisheries Exhibition, when the late Mr. Brown Goode and Dr. Bean came to London in charge of the American exhibits. I called their attention to the Linnean specimens, many of which, being of American origin, had a particular interest to American ichthyologists. The intimate acquaintance of those two gentlemen with the fishes of their own country led to a number of important identifications, which they published in the 'Proceedings of the United States National Museum,' vol. viii. 1886, pp. 193-208. But this paper included only a part of the American specimens; and, besides, it seemed to me désirable to record such particulars about the condition, history, label of each individual specimen, as to place its identity, as far as possible, beyond any doubt for the benefit of future inquirers.

I therefore devoted some portion of last year to a critical study of the collection, and to the preparation of a complete Catalogue, which I have the pleasure of offering to you for our 'Proceedings.' Of course, I spare you the reading of this Catalogue, but if you will permit me I will offer some general remarks on the collection.

The collection consists now entirely of dried half-skins of fish either loose or mounted on folio sheets of paper; many have been

\* "Linnean Type specimens of Birds, Reptiles, Batrachians, and Fishes in the Zoological Museum of the R. University in Upsala, revised by Dr. Einar Lönnberg." Bihang till K. Svensk. Vet.-Akad. Handl., Bd. xxii. no. 1.

"Catalogue of Linnean Type-specimens of Snakes in the R. Museum in Stockholm." By Lars Gabriel Andersson. Ibid. Bd. xxiv. no. 6.



fixed on cardboards, but this was done at a comparatively recent period. This method of preserving fish, like specimens of a *hortus siccus*, seems to have been first employed by Johann Friederich Gronow\*, who described it in the 'Philosophical Transactions,' and whose collection of similarly prepared skins is still preserved in the Natural History Museum.

We are informed by Sir J. E. Smith himself† that Linné's private collection contained, at the time of its purchase, 158 specimens of dried fish-skins, beside some in spirits. These latter were not kept by Smith; perhaps he did not sufficiently care for them to have them sent over from Sweden with the other parts of the collection. I make the number of specimens at present in the Society's possession to be rather higher, viz., 168; the discrepancy being probably due to the circumstance that when two small specimens of the same species were mounted on the same sheet of paper they were counted as one by the person who prepared the original inventory. At any rate there is no evidence which might lead us to suspect that any of the specimens have been lost since they came into the possession of the Society.

The collection was kept for a great many years in one of Linné's own cabinets, which, however well it may have answered its purpose in the pure air of Linné's residence, is quite unsuitable in the dust-laden atmosphere of Piccadilly; and the wonder to me is, how little the specimens have suffered under the accumulation of matter in the wrong place. In order to render them more secure in the future, your Council has ordered them to be transferred to dust-proof glass-topped boxes, in which they are so arranged that, with the aid of my Catalogue, every specimen can be found without difficulty.

In looking over the specimens, one is at once struck by the fact that the sources whence Linné obtained his fishes were but few in number, and, therefore, that his private collection represents only a fraction of the materials upon which his work on the fishes in the 'Systema Naturæ' is based. His own specimens belonged to three faunæ only, and form, in fact, three distinct sets, viz.:—

1. Scandinavian species.
2. A series of German, chiefly freshwater, fishes.
3. The fishes collected for him by Dr. Alexander Garden in South Carolina.

The *Scandinavian* series consists of 49 specimens, referable to 28 species. As all of them belong to well-known North European species which had been previously well distinguished, characterized, and described by Artedi and Gronow, no special value is attached to them. With few exceptions they were in Linné's possession in

\* "A method of preparing specimens of Fish by drying their skins as practised by John Frederick Gronovius M.D. at Leyden." *Philos. Trans.* vol. xlii. 1744, p. 57.

† *Mem. and Corresp. of the late Sir J. E. Smith*, vol. i. p. 114.



the time intervening between the publication of Artedi's 'Ichthyologia' (1738) and the tenth edition of the 'Systema Naturæ' (1758), as it proved by his annotations which accompany the specimens, but there is no evidence to show that he used them in preparing the specific diagnoses. For this work he relied chiefly on previous publications (his own and those of others), and it is a matter of rare occurrence that the actual fin-formula of the specimen in his collection agrees exactly with that given in the 'Systema.' Therefore these Scandinavian specimens cannot be claimed as types in the modern sense of the word, the less so as the species are such common forms that Linné must have had many other specimens of the same kinds at his disposal.

Also the second series, that of the *German* fishes, may be passed over in a few words. It comprises 32 specimens referable to 22 species. The specimens are neatly mounted in a uniform fashion; the cardboards have a black line round the edges, and the name of each fish is surrounded by an ornamental scroll. I have not been able to discover the name of the correspondent from whom Linné received these fishes. It would appear from the faunistic character of the collection that it was made somewhere near the Northern coast of Germany. It was sent to Linné after the publication of the twelfth edition, the sender having attempted to name the fishes according to the Linnean system—an endeavour in which he was only partially successful. And Linné himself, in revising his correspondent's identifications, fell into some curious errors, showing that the discrimination of the species of *Cyprinus* was to him in after years as much a matter of perplexity as when he wrote the Fishes for the 12th edition.

All the remaining specimens belong to species which are found on the coast and in the freshwaters of *South Carolina*. And although of some of them every mark indicating their origin has been lost or obliterated, there is satisfactory circumstantial evidence that all (or almost all) were collected for Linné by Dr. Alexander Garden, a Scotch physician, who resided in Charlestown for nearly 30 years, and with whose name Botany is even more familiar than Zoology. From Sir James E. Smith's 'Selection of the Correspondence of Linnæus' (vol. i. 1821) we can gather much information as to the friendly intercourse between Garden and Linné; but unfortunately, as far as Garden's collection of fishes is concerned, this information is very fragmentary. Smith published only a selection from Garden's letters; and, moreover, the full lists, notes, and descriptions which Garden had sent to Linné with the specimens were not reproduced. It is a singular circumstance, and one which, I believe, has not been noticed before, that none of Garden's letters, not even the originals of those which must have been in Smith's possession when he published them, seem to have been transferred to the Society; and I have not been able to ascertain what has become of them.



Garden had been an earnest student of the Flora of North America, and his first communications with Linné (in the year 1758) referred to botanical subjects only, but from the year 1760, that is two years after the appearance of the 10th edition of the 'Systema,' by Linné's special desire, he commenced to collect for his illustrious friend the Reptiles, Insects, and, particularly, the Fishes of South Carolina \*. Garden was not a merely mechanical collector; he closely examined the specimens before he sent them off, determined the genus with the aid of the tenth edition, drew up technical descriptions and collected all information which he thought might be useful to Linné. Linné frequently made use of these notes, even so far as to draw from them specific characters. Thus, when he distinguished and named a *Sargus argyrops* and a *Sargus chrysops*, he evidently relied upon Garden's notes, in which one was described with a silvery, and the other with a golden iris of the eye. On the other hand, Linné did not make the fullest possible use of Garden's collection, as he took no notice of several well-marked species to which Garden had specially directed his attention. It is difficult to account for their omission from the 'Systema,' but no doubt we should find a sufficient explanation if Linné's replies to Garden ever should come to light.

In the letters published by Smith we find distinct evidence of *four* consignments of fishes made by Garden in the years from 1760 to 1771, besides some smaller ones, of which one or more never reached their destination. I have endeavoured to allocate our specimens to the several consignments, as it is of some interest, or even importance, to discriminate between specimens which came into Linné's possession before or after the completion of the twelfth edition of the 'Systema.' In that edition Garden's specimens are mentioned under no less than forty species, either as types or as what may be called cotypes; these, of course, are the really important part of the collection; and it is satisfactory to find that of them all but three are still preserved. The missing are *Tetrodon lævigatus*, which may have been a spirit-specimen, and *Balistes hispidus* and *Argentina carolina*, to which I shall refer later on.

The *first* of the four collections which Linné received from Garden was sent to him in 1760. We do not know the extent of this consignment; no list, not even the correspondence referring to it, seems to have been preserved. The only documentary evidence of it is found in Garden's letter of 1761 (see Corr. Linn. i. p. 306), in which he says: "I have sent you the skins . . . . with a slip of paper to each, bearing the numbers and vernacular names, as *last year*." Thus the discrimination of the specimens belonging to this consignment is quite conjectural, and is based chiefly on the fact that Linné's treatment of these specimens was different from that of later consignments. He unfortunately removed Garden's original tickets, pasted the specimens on folio sheets of paper of

\* Corresp. Linn. i. p. 300.



uniform size and texture, and labelled them with the generic name in capital letters at the top of the sheet, and with the name of the species at the bottom. Only exceptionally did he take the same trouble with specimens of subsequent consignments. Besides, the specimens thus mounted are such as cannot be assigned to the later lots. I can refer only 9 specimens to this first collection with some degree of certainty; five are types.

Much more important was the *second* collection, transmitted in 1761. Although the complete list of the specimens is also lost, Garden's letter of April 12, 1761 (Corresp. Linn. i. p. 303), contains notes by which we are enabled to recognize many of them. Another great help in their identification we have in Garden's original labels, which Linné did not remove, as he had done in the first collection; they consist of a broad strip of paper wound round the tail of the fishes, on which Garden wrote the number of the specimen, the name of the Linnean genus, and the vernacular name. Frequently he repeated the number on the body of the fish, whilst Linné used also the label for adding the specific name given by himself. This consignment consisted of at least 50 specimens, under 43 numbers, of which I have identified 33, among them some 29 types and cotypes. Among the missing specimens are two important types (nos. 17 and 25), which seem to have been lost after the collection came into Smith's possession, since he himself recognized in them the types of *Argentina carolina* and *Balistes hispidus* (Corresp. Linn. i. p. 306).

The information which we have about the *third* consignment, made by Garden in the year 1763, is contained in his letter of June 2 (Corresp. Linn. i. p. 309). The specimens were prepared, labelled and described by him very much in the same manner as those of the preceding collection. In that letter 27 numbers are mentioned, but of some of the species Garden communicated to Linné notes only, as he found Sharks, Dogfishes, etc. too bulky to be conveniently enclosed in his parcels. I have identified twelve of these numbers, ten of them being types of Linnean species. None of the missing numbers were types, so that on the whole this consignment proved to be comparatively as important as the one of 1761, and its scientific value has not been diminished by the loss of the missing specimens.

The *fourth* and, as far as we know, last consignment of fishes reached Linné in 1771. Garden had despatched one of his servants to the Bahamas for the purpose of making collections for Linné, but the greater portion of the specimens were destroyed on the collector's return journey. In his letter of June 20th, Garden enumerates only 14 fishes, of which I have been able to identify 10. As these fishes reached Linné several years after the publication of the 12th edition, and are not referred to in any of his works, they do not possess the same historical value as those previously received.

Finally, there remain some thirteen specimens about which the



information is so incomplete, that we cannot assign them to any of the collections mentioned in Garden's published letters: of a few of them it is even uncertain whether Linné received them from his Charlestown correspondent or from some other source. This is the more to be regretted as five or six of them are either types, or, at any rate, require consideration in the history of the species to which they belong. Possibly more light will be thrown upon them when, as I trust, the missing part of Garden's letters is discovered. Of Linné's replies to Garden we know nothing; on his return to England, Garden may have brought the letters with him, or he may have left them in America in the custody of his son, who conformed to the constitution of the new American Government and remained in South Carolina. Thus the chances of their recovery, if they be still in existence, are very remote indeed; but if by some good fortune these remarks should come under the notice of some one possessing information which might lead to the discovery of the missing portion of the Garden correspondence, I should consider you amply repaid for the patient attention which you have kindly given to this Address.

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COMPLETE CATALOGUE OF LINNÉ'S PRIVATE COLLECTION OF FISHES,  
NOW IN POSSESSION OF THE LINNEAN SOCIETY.

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I. SCANDINAVIAN SERIES.

(1) *Perca fluviatilis*, L.

Skin,  $5\frac{1}{2}$  in. long, named by Linné.

(2) *Acerina cernua*, L.

Skin,  $4\frac{1}{2}$  in. long, named by Linné *Perca cernua*, L.

(3) *Mullus barbatus*, L.

Skin, 9 in. long, named by Linné *Mullus barbatus*; referring to Artedi on back of sheet, "*Trigla capite glabro, cirrhis geminis in maxilla inferiore. Art. gen. 43. syn. 71.*"

(4, 5) *Caranx trachurus*, L.

Head, end of lateral line, and ventral fin, named by Linné "*Trachurus.*"

Skin, 10 in. long, named by Linné "*Trachurus*"; and on back of sheet: "*Scomber linea laterali serrata. Arted.*" "*Desir. in epist. Gronov.*"



(6) *Zeus faber*, L.

Skin, 7 in. long, in bad condition; on back of sheet in Linné's handwriting, "*Zeus ventre aculeato, cauda in extremo circinnata*. Art. gen. 50. syn. 78."

(7-10) *Trachinus draco*, L.

Skin, 12 in. long, in bad condition, named in Linné's handwriting "*Trachinus draco*. Fierssing."

Skin, 12 in. long, with separate pectoral and ventral fins and branchiostegals, labelled by Linné "*Trachinus*."

Skin, 12 in. long, and head of another specimen, without any marking.

(11-16) *Trachinus vipera*, C. V.

Two skins,  $3\frac{2}{3}$  and  $4\frac{1}{4}$  in. long, with head and fins of a third specimen; on back of sheet in Linné's handwriting, "*Trachinus minoris species*, Gron."

Two skins,  $2\frac{1}{3}$  and  $2\frac{2}{3}$  in. long, with head and fins of a third specimen; on back of sheet in Linné's handwriting, "*Trachinus minor albescens*, Gron."

Singularly Linné did not recognize this species, although his attention had been drawn to it both by Artedi and Gronow.

(17) *Cottus scorpius*, L.

Skin,  $6\frac{1}{2}$  in. long, much damaged, and a separate pectoral fin, named by Linné *Cott. scorpius*. Referred to by Goode and Bean, Proc. U.S. Nat. Mus. viii. p. 196.

(18) *Trigla gurnardus*, L.

Skin, 9 in. long, in good condition, with separate pectoral fin and branchiostegals, named by Linné *Tr. Gurnardus*.

(19, 20) *Trigla cuculus*, Bl. = *T. gurnardus*.

Two skins, 7 in. long, with separate pectoral fins and branchiostegals, not named, but on back of sheet in Linné's handwriting "*Trigla minor*, Gron."

(21-23) *Trigla hirundo*, L.

Skin,  $11\frac{1}{2}$  in. long, in bad state, with separate pectoral fin and branchiostegals, not named, but on back of sheet Linné wrote: "*Triglæ facie piscis radiis membr. branchiost. utrinque septem*. Gronov."

Two skins,  $6\frac{1}{2}$  and  $7\frac{1}{4}$  in. long, in bad state, named by Linné "*Trigla Hirundo*"; on back of sheet he wrote: "*Trigla rostro parum bifido, linea laterali ad caudam bifurca*. Art. syn. 73."

(24) *Agonus cataphractus*, L.

Skin,  $4\frac{1}{2}$  in. long, with pectoral and ventral fins separate, named by Linné "*cataphractus*."



(25) *Cyclopterus lumpus*, L.

Skin, 13 in. long, in bad state; not named.

(26, 27) *Liparis liparis*, L.

Two skins,  $2\frac{1}{2}$  and 3 in. long, indifferently preserved; named in Linné's handwriting *Cyclopterus liparis*.

(28) *Zoarces viviparus*, L.

Skin,  $6\frac{1}{3}$  in. long, named by Linné "*Blenn. viviparus*."

(29-33) *Gasterosteus aculeatus*, L.

Three skins,  $1\frac{1}{2}$  to 2 in. long, named by Linné "*G. aculeatus*."

Two skins,  $1\frac{1}{2}$  in. long, pasted on a sheet with two other Sticklebacks (*G. pungitius*), the whole named by Linné "*pungitius*."

NOTE.—These five specimens belong to the forms *gymnurus* and *semiarmatus*.

(34, 35) *Gasterosteus pungitius*, L.

Two skins,  $1\frac{1}{2}$  in. long (together with two *G. aculeatus*), named by Linné "*pungitius*."

(36) *Gadus callarias*, L.

Skin,  $8\frac{3}{4}$  in. long, not in good state, named by Linné "*Gad. Callarias*. Små-Torsk."

(37, 38) *Lota lota*, L.

Skin, 10 in. long, not in good state, labelled by Linné "Lake."

Skin,  $6\frac{1}{4}$  in. long, in bad state. Linné wrote on the back of the sheet: "? Phycis, Art. gen. App. 84. Habitat in Aqua dulci."

(39) *Phycis phycis*, L.

Skin,  $4\frac{3}{4}$  in. long, not in good state, without any mark or label.

= *Blennius phycis*, L., or *Phycis mediterraneus*, De la R.

(40) *Motella mustela*, L.

Skin, 8 in. long, with separate pectoral fin; sheet labelled by Linné "*Gadus* ? Whistlefish. Willughb. 121."

(41) *Ammodytes tobianus*, L.

Skin in bad state,  $6\frac{1}{4}$  in. long, named by Linné "*Ammodytes*."

(42, 43) *Rhombus maximus*, L.

Skin, 9 in. long, named by Linné *Pleur. maximus*, L. On the reverse in unknown handwriting "Stein-but aus der Ost See. 12."

Skin, 5 in. long, named (in error) by Linné "*rhombus*"; the specimen is still without tubercles, but the fin-formula: D. 60,



A. 43 (as counted and marked by Linné himself), shows that the fish is a young Turbot, and not a Brill.

(44) *Leuciscus rutilus*, L.

Skin,  $6\frac{1}{2}$  in. long, not named; on back of paper reference to Artedi.

(45) *Osmerus eperlanus*, L.

Skin, 5 in. long, damaged by dermestes; Linné wrote on back of sheet reference to Artedi, gen. 10. syn. 21. spec. 45.

(46, 47) *Clupea sprattus*, L.

Two skins,  $4\frac{1}{2}$  in. long, in bad state; marked by Linné on back of sheet "Spratti."

(48) *Clupea alosa*, L.

Skin,  $7\frac{3}{4}$  in. long, not in good state. Linné wrote on the back of the sheet: Pinna axi ossiculis 24, hinc diversa Clypea maxilla inferiore longiore, maculis nigris carens. Art. cui in reliquis omnibus simillima. Cl. A. Alosa."

Linné does not refer in the 'Systema' to a specimen with 24 anal rays.

(49) *Siphonostoma typhle*, L.

Skin,  $15\frac{1}{2}$  in. long, well preserved; named in unknown hand. D. 39.

## II. GERMAN SERIES.

The names of this list are those used by Linné's Correspondent, or by Linné himself. When the species has been misnamed, the corrected name is placed within brackets.

(50, 51) *Perca fluviatilis*.

(52, 53) *Perca cernua*. Stur-Barsch.

(54) *Gadus lota*.

(55) *Pleuronectes platessa*. Bütte.

(56) *Cyprinus carassius*.

(57) [*Gobio fluviatilis*] misnamed *Cobitis barbatula*.

(58) [*Gobio fluviatilis*] misnamed *Cobitis*, and in Linné's handwriting *Cyprinus phoxinus*.

(59) [*Leuciscus rutilus*] named "*Cyprinus grieslagine*, L. Roth-auge."

(60) [*Leuciscus rutilus*] named "*Cyprinus grieslagine*, L. mas dum prurit."



- (61) [*Leuciscus rutilus*] named "Germanis Fache," in Linné's handwriting "*idbarus*?"
- (62) *Cyprinus* "cephalus" in Linné's handwriting.
- (63) [*Leuciscus leuciscus*], *Cyprinus* "*dobula*" in Linné's handwriting.
- (64) *Cyprinus leuciscus*.
- (65, 66) [*Leuciscus erythrophthalmus*] misnamed *Cyprinus rutilus*.
- (67, 68) *Cyprinus phoxinus*.
- (69) *Cyprinus tinca*.
- (70) [*Rhodeus amarus*] *Cyprinus aphyia*, L. Bitterling.
- (71) [*Abramis vimba*] misnamed *Cyprinus nasus*.
- (72) [*Abramis blicca*] misnamed *Cyprinus idbarus*, L. Fache.
- (73) *Cobitis fossilis*, named by Linné.
- (74) *Cobitis barbatula*, named by Linné.
- (75, 76) *Esox lucius*.
- (77, 78) [*Salmo fario*], *Salmo trutta*, L. Forelle.
- (79) *Salmo tymallus*.
- (80) *Muræna anguilla*.
- (81) *Petromyzon branchialis*.

### III. GARDEN'S SOUTH CAROLINA COLLECTIONS.

#### A. CONSIGNMENT OF 1760.

- | (Linnean name.)  | (Modern name.)           |
|--|--------------------------|
| <b>Labrus auritus</b> (type).  | <b>Pomotis auritus.</b>  |
| (82) Skin, 7 in. long, in good condition, but without any marks. Labelled by Linné <i>LABRUS auritus</i> . Under this name Linné included also specimens of <i>Pomotis punctatus</i> (see nos. 95-97, 159, 160).   |                          |
| <b>Zeus gallus.</b>  | <b>Argyriosus vomer.</b> |
| (83) Skin, $4\frac{1}{3}$ in. long, injured; mark on the specimen very indistinct, perhaps no. 1. Labelled by Linne <i>ZEVS Gallus</i> ; referred to by Goode & Bean, Proc. U.S. Nat. Mus. viii. p. 196. <i>Zeus vomer</i> , L., and <i>Zeus gallus</i> , L., are in my opinion the same fish. |                          |



(Linnean name.)

(Modern name.)

**Teuthis hepatus.****Acanthurus chirurgus.**

- (84) Skin, 11 in. long, well preserved, but without any mark. Labelled by Linné *TEUTHIS Hepatus*.

No reference in Garden's letters can be applied to this specimen. Goode & Bean (p. 205) speak of it as a "type," but Linné does not refer to it in the 'Syst. Nat.,' his references applying partly to an Atlantic, partly to an Indian species.

**Gasterosteus canadus (type).****Elacate canada.**

- (85) Skin,  $15\frac{1}{2}$  in. long, in bad condition.

Garden's label: "No. 7"; and in Linné's handwriting "Gasterosts."

Referred to by Goode & Bean, p. 203.

**Cyprinus americanus (types).****Abramis americanus.**

- (86, 87) Two skins, 5 and 7 in. long, in good condition, without markings. Labelled by Linné *CYPRINUS americanus*.

Referred to by Goode & Bean, p. 206.

**Clupea thrissa.****Chatoëssus cepedianus.**

- (88, 89) Two skins,  $5\frac{1}{2}$  and  $8\frac{1}{2}$  in. long, without marks. Labelled by Linné *CLUPEA Thrissa*.

There is no doubt that these specimens are mentioned by Linné in the 12th edition under *Clupea thrissa*, with which species he confounded them, as shown by Goode & Bean, p. 206.

**Elops saurus (type).****Elops saurus.**

- (90) Skin, 22 in. long, divided into two halves, without mark. Labelled by Linné *ELOPS saurus*.

Mentioned by Goode & Bean, p. 205.

## B. CONSIGNMENT OF 1761.

**Perca atraria (type).****Centropristis atrarius.**

- (91) Skin,  $9\frac{1}{2}$  in. long, in good condition.

Garden's label: No. 14. *Perca marina*. Nostrat. Black-fish.

Mentioned in Corresp. Linn. i. p. 306.

Referred to by Goode & Bean, p. 202.

Singularly Linné has given an erroneous fin-formula. Jordan & Evermann adopt for this fish a name used by Linné in the 10th edition, viz. *Labrus striatus*.

**Perca formosa (type).****Centropristis formosus.**

(*Centropristis radians*, Q. G.)

- (92) Skin, 8 in. long, in bad condition.

Garden's label: "No. 3. *Perca* sp. Nostrat. Squirrel-fish," to which Linné has added on the reverse of the label "*Perca formosa*."



Mark on the specimen by Garden "No. 3. Perca."

Referred to by Goode & Bean, p. 203, under the erroneous number 35.

Linné's *Perca formosa* is based:—

1. Partly on Catesby's figure, which he quotes (tab. 6) and which represents a well-known species of *Hæmulon*; part of Linné's description, "*P. dorsalis* anterior abbreviata versus posteriorem," can apply to this fish only.
2. Partly on the specimen sent by Garden, and which is a *Centropristis*.

For which of these two fishes should the name *formosa* be retained? As Dr. Jordan seems to have been the first to point out the composition of this Linnean species (Proc. U.S. Nat. Mus. 1883, p. 600), I think that he should be followed in leaving the name to the Squirrel-fish of South Carolina.

(Linnean name.)

(Modern name.)

***Perca philadelphica*.**

***Centropristis trifurcus*.**

(93) Skin, 6 in. long.

*cfr.* Garden's label: No. 2. *Perca* sp. Nostrat.: b. a Chub.

156. Mark on the specimen by Garden, "No. 2. *Perca*."

Referred to by Goode & Bean, p. 202.

This is the specimen from which the notes in the 12th edit. were taken, but it is not the type of *P. philadelphica* of the 10th edit., as no specimen had reached Linné from Garden at the time of the publication of that edition.

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***Micropterus salmonoides*.**

(*Huro nigricans*.)

(94) Skin, 12½ in. long, in good condition.

*cfr.* Garden's label: No. 40. *Labrus*. Nostratibus Freshwater

158. Trout.

Mentioned in Corresp. Linn. i. p. 306.

Identified by Goode & Bean, p. 208.

Not admitted by Linn. in Syst. Nat.

***Labrus auritus* (cotype).**

***Pomotis auritus*.**

(95) Skin, 7 in. long, rather damaged.

Garden's label: No. 41. *Labrus*. Nostrat. Red-bellied Perch.

Erroneously referred to by Goode & Bean as "No. 11. Garden," p. 200.

***Labrus auritus* (cotype).**

***Pomotis punctatus*.**

(96) Skin, 6 in. long, in good condition.

*cfr.* Garden's label: No. 42. *Labrus*. Nostrat. Speckled Perch.

159, 160. The presence of a more or less rudimentary supplemental maxillary bone is regarded by American authors as a sufficient ground for maintaining a genus *Apomotis* as distinct from *Pomotis*. Mr. Boulenger refers to this genus *Bryttus punctatus*



(C. V.), and is followed in this by Jordan & Evermann (Fish. N. Amer. i. p. 997). I cannot find a trace of that bone in five specimens.

Linné considered this and the following specimen to be specifically identical with *P. auritus*.

(Linnean name.)

(Modern name.)

**Labrus auritus** (cotype).

**Pomotis punctatus**.

- (97) Skin, 9 in. long, much broken and mutilated.  
Garden's label: No. 43. *Perca*. Nostrat. Freshwater Bream.  
Determined by Goode & Bean as "Copper-nosed Bream," p. 200.

**Perca chrysoptera** (types).

**Orthopristis chrysopterus**.

- (98) Skin,  $12\frac{1}{3}$  in. long, in good condition.  
Garden's label: No. 8. *Perca* mar sp. Nostratib. Sailor's choice.
- (99) Skin,  $8\frac{1}{3}$  in. long, in good condition; labelled by Garden on specimen: No. 8. *Perca* marina.  
Identified by Goode & Bean, p. 202.

**Chætodon triostegus**.

**Ephippus faber**.

- (100) Skin,  $8\frac{1}{4}$  in. long, in good condition.  
Garden's label: No. 22. *Chætodon*. Nostrat. Angel-fish.  
Mentioned by Linné under, and confounded by him with, *Chætodon triostegus* of the 12th edit.: an error recognized by himself, as explained by Goode & Bean, p. 128, and subsequently rectified by Cuvier & Valenciennes, vii. p. 113.

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**Sargus ovis**.

- (101) Skin, 5 in. long, much injured.  
Garden's label: *Sparus* species. Nostrat. Sheeps-head.  
Not admitted in Syst. Nat.  
Identified by Goode & Bean, p. 208.

**Sparus rhomboides** (types).

**Sargus rhomboides**.

- (102) Skin, 7 in. long, in good condition, marked on the specimen  
*cfr.* by Garden "Sparus no. 5, Cat. 2. t. 4." \*
161. Garden's label: No. 5. *Spari* sp. Nostrat. Saltwater Bream.
- (103) Skin,  $8\frac{3}{4}$  in. long, in good condition, marked on the specimen  
by Garden, "No. 9. *Sparus*."  
Garden's label: No. 9. *Sparus*.

**Sparus chrysops** (type).

**Sargus chrysops**.

- (104) Skin,  $8\frac{1}{2}$  in. long, in good condition.  
Garden's label: No. 6. *Spari* sp. Nostrat. Porgee.  
Linné wrote on the reverse of Garden's label "*Sparus chrysops*."  
Referred to by Goode & Bean, p. 198.

\* Garden's reference to Catesby.



(Linnean name.)

(Modern name.)

**Sparus argyrops** (type).**Sargus chrysops**.

- (105) Skin,
- $8\frac{1}{2}$
- in. long, in good condition.

Garden's label: No. 7. Nostrat. Porgee. Spari sp.

Linné wrote on the reverse of Garden's label "*Sparus argyrops*."

Referred to by Goode &amp; Bean, p. 198.

*Sp. chrysops* and *Sp. argyrops* are the same fish, and probably my *Sargus ambassis*.**Perca ocellata** (type).**Sciæna ocellata**.

- (106) Skin,
- $15\frac{1}{3}$
- in. long, in good condition.

Garden's label: No. 39. *Perca cauda ocellata*. Nostrat. The Bass.

Referred to by Goode &amp; Bean, p. 202.

- (107) A second skin, of the same size and very similar to the former, is without any mark. It is impossible to say whether the two skins were sent at the same time, or whether the second belongs to a later consignment.

**Perca punctatus**,**Sciæna chrysura**.

Ed. xii. p. 482 (type).

- (108-9) Two skins, 6 in. long, in good condition, marked on the body "No. 12.
- Perca*
- ."

Garden's label: No. 12. *Perca*. Nostrat. Yellow-Tails.

Referred to in Corr. Linn. i. p. 306; and by Goode &amp; Bean, p. 201.

Not to be confounded with *Perca punctata*, L., ed. xii. p. 485.**Sciæna lanceolata**.

- (110) Skin,
- $6\frac{3}{4}$
- in. long, in good condition, marked on body as on label.

Garden's label: No. 13. Nostr.—*Perca*.

Identified by Goode &amp; Bean, p. 208.

Not specially mentioned by Linné, who probably considered it identical with the preceding specimens (*Sciæna chrysura*).This specimen shows very distinctly the lower, downwards directed præopercular spine, on which the subgenus *Zestidium* is based. *Stellifer* (*Zestidium*) *illecebrosus* of Gilbert, Jordan & Evermann seems to be specifically identical with *Sciæna lanceolata*.**Perca alburnus** (type).**Umbrina alburnus**.

- (111) Skin, 11 in. long, in good condition, marked on body "No. 30."

Garden's label: No. 30. *Cyprinus*. Nostrat. Whiting.

Referred to by Goode &amp; Bean, p. 202.



(Linnean name.)

(Modern name)

**Perca undulata** (type).**Micropogon undulatus.**

- (112) Skin, 10 in. long, in good condition.

Garden's label: No. 10. *Perca*. Nostrat. Croker.

Referred to by Goode &amp; Bean, p. 202, with the erroneous number "No. 8."

- (113) A second skin, 10½ in. long, with injured tail, is labelled on the abdomen by Garden "No. 10. Cat. 2. t. 3. f. 1," which is a correct reference to Catesby. This specimen may have been sent with the first, or on a later occasion.

**Trichiurus lepturus.****Trichiurus lepturus.**

- (114) Skin, 30 in. long, much damaged.

Garden's label: No. 1. *Trichiurus*. Nostratib. Snakefish.

Identified by Goode &amp; Bean, p. 195.

- (115) Head, 8 in. long, of a very large specimen, without label or mark, probably sent with the first specimen.

**Gastrosteus saltatrix** (cotype).**Temnodon saltator.**

- (116) Head and fragments of skin.

*cfr.* Garden's label: No. 31. *Saltatrix*. Skipjack.

135. The specimen was already in this condition when Linné received it, as we may infer from Garden's letter in
- Corresp. Linn.*
- i. p. 312; by a lapsus he mentions there this specimen as "No. 33 of my last parcel," and he seems to have forgotten that he saved these fragments from the ravages by "vermin."

**Echeneis naucrates.****Echeneis naucrates.**

- (117-18) Two skins, 14 and 13 in. long, in good condition.

Garden's label: No. 32. *Echeneis*. Nostrat. Sucking Fish.Not mentioned by Linné, who in the 'Systema' limits the range of the species to "*Pelagus indicus*."

Referred to by Goode &amp; Bean, p. 195.

**Gadus tau** (types).**Batrachus tau.**

- (119-20) Two skins, 5 and 6½ in. long, not well preserved.

Garden's label: No. 16. Nov. Gen. Nostrat. Toad Fish.

Referred to in *Corresp. Linn.* i. p. 305 (see also p. 314).

Identified by Goode &amp; Bean, p. 195.

**Trigla evolans** (type).**Prionotus evolans.**

- (121) Skin, 4½ in. long, tolerably well preserved.

Garden's mark on the specimen: No. 21.

Label round the tail in Linné's handwriting: *Trigla evolans*.

Described by Goode &amp; Bean, p. 204.

**Pleuronectes dentatus** (type).**Pseudorhombus dentatus.**

- (122) Skin, 11 in. long, well preserved.

Garden's label: No. 28. *Pleuronectes*. Plaice.

Identified by Günther, iv. p. 425.



(Linnean name.)

(Modern name.)

**Pleuronectes lineatus** (type).**Solea lineata.**

(Ed. xii.)

- (123) Skin,
- $6\frac{1}{2}$
- in. long, in good condition.

Garden's label: No. 26. *Pleuronectes*. Nostratib. Sole.On the reverse of label in Linné's handwriting: "*lineatus*."

Identified by Günther, iv. p. 476.

In the *tenth* edition Linné described first this Sole as *Pl. lineatus* after Brown & Sloane; so that Garden's specimen cannot be regarded as the type of the species, as it appeared in that edition. When he gives 45 as the number of anal rays, he seems to have included the ventral rays; the specimen has 40 anal rays only. In the 10th edition the species is correctly placed among those which have the eyes on the right side, but by some inadvertence he transferred it in the 12th edition to the left-eyed species.

**Pleuronectes plagiusa** (type).**Aphoristia ornata.**

- (124) Skin, 5 in. long, not in good condition.

Garden's label: No. 27. *Plagusia*.

On the reverse of this label in Linné's handwriting: "*Pleuron. Plagiusa*."

Referred to in Linn. Corr. i. p. 306, but not p. 314 (as supposed by Goode & Bean); the fish referred to by Garden in his consignment of June 2, 1763, must have been a very different kind of fish quite unknown to him, while he was well acquainted with *Aphoristia*, which he sent under the name of Taper-Flounder.

The scales of the specimen are partly rubbed off, but I count about 90 transverse series, and not 77 as given by Goode and Bean. Singularly, Linné places this fish among the right-eyed species—an error by which I was misled into supposing that the specimen might be a species of *Apionichthys* (Günth. iv. p. 490).

**Silurus felis** (type).**Ælurichthys felis.**

(Ælurichthys marinus, Mitch.)

- (125) Skin, 13 in. long, damaged by dermestes.

Garden's label: No. 19. *Silurus*. Nostratib. Cat Fish.

The same number written by Garden on the specimen.

On the reverse of this label in Linné's handwriting: "*S. felis*."

Referred to in Corresp. Linn. i. p. 306, where the number is misprinted 10 for 19.

Referred to by Goode & Bean (p. 205), who, however, identify the specimen with a species of *Arius* (*milberti*)—an error perpetuated in subsequent American publications.

**Clupea vernalis.**

- (126) Skin,
- $9\frac{1}{3}$
- in. long, in good condition.

Garden's label: No. 4. *Clupea*.



Not referred to in Syst. Nat.  
 Identified by Goode & Bean, p. 208.  
 No teeth. D. 16. A. 18.

(Linnean name.)

(Modern name.)

**Balistes vetula** (cotype).

**Balistes vetula.**

(Ed. xii.)

- (127) Skin,  $11\frac{1}{2}$  in. long, in good condition, without label or number.

No doubt referred to in Corresp. Linn. i. p. 306 as *Balistes* no. 25.

**Amia calva** (type).

**Amia calva.**

- (128) Skin,  $13\frac{1}{4}$  in. long, in good condition.

Labelled by Linné himself.

Referred to in Corresp. Linn. i. p. 305 as "Mud-fish no. 11."

Messrs. Goode & Bean (p. 204) refer this specimen to the 1763 collection. The number on the specimen is now nearly effaced, and it may be taken for 4 or 11; but in Smith's time it was evidently distinct enough to enable him to identify the specimen without difficulty.

**Pteroplatea maclura.**

- (129) Skin,  $9\frac{1}{2}$  in. broad, well preserved.

Garden's label: No. 37. Raja. Nostratib. Maid.

Referred to in Corresp. Linn. i. p. 306, as "No. 38. Raja."

Left unnoticed by Linné.

#### C. CONSIGNMENT OF 1763.

**Scomber hippos** (type).

**Caranx hippos.**

- (130) Skin, 11 in. long, in good condition.

Garden's original label is lost, but "No. 16" was written by him on the specimen.

Mounted on a sheet of paper, like specimens of the 1760 consignment; labelled by Linné at the top of the sheet "*SCOMBER*," and at the bottom "*chrysurus*."

Believed to be referred to in Corresp. Linn. i. pp. 311, 312; but the specimen may possibly be one of the 1760 consignment.

Identified by Goode & Bean, p. 203.

**Scomber chrysurus** (types).

**Micropteryx chrysurus.**

- (131-4) Four skins, from  $4\frac{3}{4}$  to  $6\frac{1}{2}$  in. long.

Garden's original labels are lost, but one specimen is numbered 2, another bears the number 5.

All four mounted on the same sheet of paper, labelled, like the preceding, by Linné "*SCOMBER*" at the top of the sheet, and "*chrysurus*" at the bottom.

Referred to in Corresp. Linn. i. pp. 311, 312; and by Goode & Bean, p. 204.



(Linnean name.)

(Modern name.)

**Gasterosteus saltatrix** (cotype).**Temnodon saltator.**

(135) Skin,  $10\frac{1}{4}$  in. long, damaged by dermestes, as mentioned by *cfr.* Garden (Corr. Linn. i. p. 312).

116. Garden's label: "No. 7. Skipjack," to which Linné has added, "t. 14 \*." *Gasterosteus saltatrix*."

**Gasterosteus carolinus** (type).**Trachynotus carolinus.**

(136) Skin,  $9\frac{1}{2}$  in. long, much damaged.

Garden's label: "No. 8. The Crevallee," to which Linné has added "*Gasterosteus carolinus*."

The texture of the paper of the label, and the mode in which it is made, show that the skin was prepared at the same time as the preceding No. 7, and that it is meant by the reference in Linn. Corr. i. p. 311, although Garden enumerates it among the freshwater species.

Referred to by Goode & Bean, p. 203.

**Chætodon alepidotus** (types).**Stromateus alepidotus.**

(137) Skin,  $5\frac{1}{4}$  in. long, in good condition.

Garden's "No. 13" written on the body.

(138) Skin, 6 in. long, damaged.

Garden's "No. 13" written on the body, but only the figure 3 preserved, the remainder being eaten away by dermestes. (The figure 12 was struck out by Garden himself.)

Both skins mounted on the same sheet of paper and labelled by Linné "*CHÆTODON*" "*alepidotus*."

Referred to in Corresp. Linn. i. pp. 311, 313, and by Goode & Bean, p. 198.

**Mugil albula** (type).**Mugil cephalus**, L.

(139) Skin, 13 in. long, in good condition.

Garden's label: "No. 1. Mullet," to which Linné has added "t. 6" as reference to Catesby.

Identified by Goode & Bean, p. 306.

**Labrus hiatula** (type).**Tautoga onitis.**

(140) Skin,  $10\frac{1}{2}$  in. long, with the anal fin lost.

Garden's "No. 17" written on the specimen; but the sheet on which the specimen is mounted is labelled "*Labrus hiatula*" in Linné's (?) handwriting.

Referred to in Corresp. Linn. i. pp. 311, 313, and in Syst. Nat. ed. xii. p. 475.

Identified by Goode & Bean, p. 260, who erroneously give 14 as the number of the specimen.

\* Reference to Catesby.



As Linné's description of *L. hiatula* contains the misleading character of the supposed absence of an anal fin, and as he describes the same species again under the name of *L. onitis*, the latter name should be retained.

(Linnean name.)

(Modern name.)

**Sparus radiatus** (type).**PlatyGLOSSUS bivittatus.**(12th ed., excl. refer. to  
Catesby.)

- (141) Skin,  $8\frac{3}{4}$  in. long, in good condition.  
Garden wrote "No. 19" on the specimen.  
Mentioned in Corresp. Linn. i. pp. 311, 313, and in Günth.  
Fish. iv. p. 164.

**Coryphæna psittacus** (type).**Novacula psittacus.**

- (142) Skin, 7 in. long, damaged.  
Garden wrote "No. 20" on the specimen.  
Mounted on a sheet of paper, at the bottom of which Linné  
wrote "*Coryphæna psittacus*."  
Referred to in Corresp. Linn. i. pp. 311, 313.  
Identified by Goode & Bean, p. 195.

**Cobitis heteroclitus** (types).**Fundulus heteroclitus.**

- (143-4) Two skins, not in good condition, 4 and  $4\frac{2}{3}$  in. long.  
Garden wrote on the specimens "No. 11. Anonymos."  
Referred to in Corresp. Linn. i. p. 311, and by Goode &  
Bean, p. 204, who, however, seem to have seen only one  
of the specimens, which they took to be part of the 1761  
consignment. It is not likely that Garden would have labelled  
"Anonymos" a fish to which he assigned a vernacular name in  
his letter.

**Esox osseus.****Lepidosteus osseus.**

- (145) Skin, 16 in. long, damaged.  
Garden's label: "No. 9," to which Linné added "*Esox*  
*osseus*." The same number is written on the specimen.  
Referred to in Corresp. Linn. i. pp. 311, 313, and in Syst.  
Nat. ed. xii. p. 516.

## D. CONSIGNMENT OF 1771.

**Serranus apua**, Bl.

- (146) Skin, 11 in. long, in good condition.  
*cfr.* Garden's number on specimen: No. 8.  
157. Mounted by Linné on the same sheet as *Hæmulon flavo-*  
*lineatum*.  
Referred to in Garden's letter as "8. Hind," Corresp. Linn.  
p. 331.



(Linnean name.)

(Modern name.)

**Pristipoma virginicum**, L.

- (147) Skin, 9 in. long, much broken.  
 Garden's number on specimen: No. 10.  
 Referred to in Garden's letter as "10. Pork-fish," Corresp. Linn. i. p. 332.  
 Mentioned by Goode & Bean, p. 199.

**Hæmulon elegans**, C. V.*Hæmulon sciurus*, Shaw, Jordan.

- (148) Skin, 12 in. long, much broken.  
 Garden's number on specimen: No. 4.  
 Referred to in Garden's letter as "4. Yellow Grunt," Corresp. Linn. i. p. 331.  
 Identified by Goode & Bean, p. 207.

**Hæmulon xanthopteron**, C. V.*Hæmulon flavolineatum*, Desm., Jordan.

- (149) Skin,  $7\frac{1}{2}$  in. long, in bad condition, without anal fin.  
 Garden's writing on the specimen is nearly effaced, only the word "Grunt" remaining on the tail.  
 Referred to in Garden's letter as "No. 9. Small White Grunt," Corresp. Linn. i. p. 331.  
 Mounted by Linné on the same sheet of paper as *Serranus apua* (no. 146).

- (150) Skin, 7 in. long, in good condition.  
 Garden wrote "Grunt" on the body; it was probably sent to make up for the mutilated condition of the preceding specimen.

**Hæmulon gibbosum**, Walb.,  
Schn., Jordan.

- (151) Skin,  $14\frac{3}{4}$  in. long, in good condition.  
 Garden's number on specimen: No. 3.  
 Referred to in Garden's letter as "3. Marget Fish." The same species is figured by Catesby under the same vernacular name (ii. t. 2. f. 1), which figure Linné erroneously associated with his *Perca chrysoptera*.  
 Identified by Goode & Bean (p. 207) with *Hæmulon arcuatum*, C. V.; however, Jordan (Proc. U.S. Nat. Mus. 1885, p. 191; 1886, p. 396) has shown that the "Margate Fish" of Catesby and Garden is *Perca gibbosa* of Walbaum and *Calliodon gibbosus* of Schneid., and that *Hæmulon album*, C. V., and *Hæmulon microphthalmum*, Günth., are identical with it (Fish. N. Amer. ii. p. 1295). I am inclined to agree with him in these identifications; only remarking that in specimens of *H. album* and *H. microphthalmum* from the West Indies the eleventh and twelfth dorsal spines are equally short, whilst in Garden's specimen the eleventh is the shortest spine, only half as long as the twelfth.



(Linnean name.)

(Modern name.)

*Sphyræna picuda*, Bl. Schn.

- (152) Skin, 24 in. long, not in good condition, divided in the middle of the length into two halves.

Garden's number on specimen: No. 5 (very faint).

Referred to in Garden's letter as "5. Blue-fish," Corresp. Linn. i. p. 331.

Mounted on a sheet of paper, with "*CHROMIS*" in Linné's handwriting at the top.

*Aulostoma coloratum*.

- (153) Skin, 21 in. long, in good condition.

Without any label or mark, but probably "11. Trumpet Fish" of Garden's letter, p. 332.

*Cossyphus rufus*.

- (154) Skin,  $10\frac{1}{2}$  in. long, in good condition.

Garden's number on specimen: No. 7.

Referred to in Corresp. Linn. i. p. 331.

Identified by Goode & Bean, p. 200.

*Monacanthus setifer*, Benn.,  
Var.  $\beta$ , Günth.

- (155) Skin,  $4\frac{1}{3}$  in. long, with the dorsal fin mutilated.

Original label or number lost, but probably "14. Leather-coat" of Garden's letter, p. 332.

Mounted on a sheet of paper, with "*BALISTES*" at the top and "*monoceros*" at the bottom in Linné's handwriting, to which species this specimen, of course, cannot be referred, as it has only 29 anal rays.

Linné (Syst. Nat.) mentions a Garden specimen under *Balistes hispidus*; but this cannot be our present specimen, since it is described as having "*corpus versus caudam setis exasperatum*," of which no trace is visible in the present specimen. The type of *B. hispidus* is lost.

## E. SPECIMENS OF UNCERTAIN DATE.

*Perca philadelphica* (type).*Centropristis trifurcus*.

- (156) Skin, 9 in. long, in good condition, without any mark on the *cfr.* specimen\*.

93. Mounted on a folio sheet, labelled by Linné himself "*Perca philadelphica*."

If I am right in supposing that this specimen was in Linné's possession at the time of the publication of the tenth edition, it follows that it must be regarded as the type of *Perca philadelphica*, and, secondly, that it was not sent by

\* Is this specimen mentioned by Goode & Bean, p. 202? If so, I do not understand their reference to "No. 14. Garden," which is quite a different fish.



Garden, but that Linné received it from another source. The type of *Perca trifurca*, with the third and fourth dorsal spines "auctus ramento setaceo longitudine ipsius spinæ," seems to be lost.

(Linnean name.)

(Modern name.)

*Perca guttata* (? type).

*Serranus apua*, Bl., C. V.

(157) Skin,  $11\frac{1}{2}$  in. long, in good condition.

*cfr.* Mounted on a folio sheet, labelled by Linné himself "*Perca* 146. *guttata*, L."; it is possible that the specimen came from Garden, but there is no means even to conjecture at what time Linné received it.

Referred to by Goode & Bean as "*Epinephelus lunulatus*, A. iii. 8," and by Jordan in Proc. U.S. Nat. Mus. 1885. p. 396. I count nine soft rays in the anal fin.

*Perca guttata* of the 10th and 12th editions is a merely nominal species, based upon figures by previous authors, which represent different fish. There is no indication in either edition that Linné had this or any other specimen; he even omitted to give a fin-formula. Under such circumstances I consider it best to ignore the name altogether, and to adopt the nomenclature of a later and better informed authority. But if the name is to be retained for a definite species of *Serranus*, the specimen in the Linnean collection may be utilized as type, as it shows at any rate that Linné referred this fish to his "*Perca guttata*," whatever the limits are which he covered by that name.

I retain for this species a name given by Bloch and sufficiently established by Cuvier-Valenciennes, viz., *Serranus apua*.

If Mr. Boulenger (Cat. i. p. 210) refers to the synonymy of this species *Serranus maculatus*, Günth. i. p. 130, I have to reply that the latter has two rays less in the dorsal fin.

————— *Micropterus salmonoides*.

(*Huro nigricans*.)

(158) Skin,  $8\frac{1}{2}$  in. long, in good condition.

*cfr.* Marked with the figure "8" in Garden's handwriting.

94. Ignored by Linné.

Identified by Goode & Bean, p. 306.

*Labrus auritus* (? cotypes).

*Pomotis punctatus*.

(159-60) Two skins,  $4\frac{3}{4}$  in. long, in good condition.

*cfr.* Mounted on paper, without any marks.

96-7.

*Sparus rhomboides* (cotype).

*Sargus rhomboides*.

(161) Skin,  $6\frac{1}{2}$  in. long, in good condition.

*cfr.* Garden's label: "No. 3. Mutton-fish," and on the reverse of 102-3. the label in Linné's handwriting, "*Sparus Perca rhomboidalis*" (the word *Perca* struck out).

This specimen must have belonged to a consignment different from those mentioned in the Corresp. Linn.



(Linnean name.)

(Modern name.)

**Otolithus carolinensis.**

- (162) Skin, 19 in. long, in good condition.

Garden's label: No. 5. Sea-Trout.

This specimen cannot belong to either of the consignments mentioned in Corresp. Linn., in all of which the number 5 is given to some other fish. It is very unlikely that Linné included it under his *Perca punctatus*, as suggested by Goode & Bean, p. 201.

**Pseudoscarus sp.**

- (163) Skin,
- $11\frac{3}{4}$
- in. long, not in good condition.

Marked on the body with the figure 2.

Mounted on a folio sheet, with the name "*ORPHUS*" on the top.

If it came from Garden, it might be one of the Parrot-fishes mentioned in Garden's letter of August 4, 1766 (Corresp. Linn. i. p. 326).

It seems to be a species of *Pseudoscarus*: the scales on the cheek are obscured by varnish; probably they formed a single series with an additional scale on the limb of the præoperculum. The specimen is not referable to any Linnean species, and therefore it would be unimportant, as it certainly would be risky, to attempt its specific determination.

**Pleuronectes lunatus.****Pseudorhombus dentatus.**

- (164) Skin,
- $11\frac{3}{4}$
- in. long, in good condition.

Garden's label: "No. 9," to which Linné has added "*Pleuronectes*, t. 27," and on the reverse "*lunatus*."

Identified by Günther, iv. p. 426.

This specimen belongs to a consignment not mentioned in any of the letters preserved in Corresp. Linn.; it was erroneously referred by Linné to Catesby, t. 27, which he named *Pleuronectes lunatus*.

**? Exocætus exsiliens, Bl., Lilljeb.**

- (165) Skin, 6 in. long, in fragmentary condition.

Garden's label: "No. 25," to which Linné has added "*Exocætus volans*."

The specimen belongs to a consignment not mentioned in the Corresp. Linn., and is too much injured to admit of identification; it has long ventrals, rather short pectorals, and a high dorsal fin.

**Syngnathus pelagicus, var.****Syngnathus louisianæ.**

(Edit. xii.) (Type.)

- (166) Skin,
- $9\frac{1}{2}$
- in. long, in good condition, without any mark or label.

Linné states: D. 33, Oss. rings  $25 + 32 = 57$ . I count: D. 35, Oss. rings  $20 + 37 = 57$ .



(Linnean name.)

(Modern name.)

**Syngnathus hippocampus.****Hippocampus antiquorum.**

(167-8) Two skins, about 3 and  $4\frac{1}{3}$  in. long, without any mark or label.

These specimens may have come from any source. Linné's diagnosis of his *Syngnathus hippocampus* is difficult to understand, so far as the dermal laminae and spines are concerned in other respects it applies fairly well to *Hippocampus antiquorum*.

Sir Dietrich Brandis then moved:—"That the thanks of the Society be given to the President for his excellent Address, and that he be requested to allow it to be printed and circulated amongst the Fellows;" and this, having been seconded by Mr. F. Du Cane Godman, was carried unanimously.

The Society's Gold Medal for the year was formally presented to Mr. JOHN GILBERT BAKER in recognition of his important contributions to Botany, and was received and duly acknowledged by that gentleman.

In making the presentation the President said:—

"The Council have decided to award the Linnean Medal of this year to John Gilbert Baker.

"In the case of a worker who has cultivated science so diligently and for so many years as our Medallist, it would be impossible to enumerate all the publications by which he has advanced the study and knowledge of Botany; I must limit myself to the chief of them.

"He had barely attained the age of twenty-one when he drew up an account of the flowering plants of his native county, correcting and enlarging that given in Baines' 'Flora of Yorkshire.' Continuing these observations he brought out his well-known work, 'North Yorkshire'; a work which for thoroughness and for conciseness of expression remains unrivalled.

"After his removal to Kew, one of the first fruits of his labours was the 'Synopsis Filicum,' which appeared in 1868, and which, in its second edition, is the latest exposition of the Ferns of the whole world: this work, indeed, had been planned and commenced by Sir William Hooker, but its completion, from page 56 to the end, was entrusted to, and carried out by, Baker. The following year was marked by the appearance of the first volume of Wilson Saunders's 'Refugium Botanicum,' Baker contributing the greater part of the descriptions in this series; by the revision of the genus *Narcissus*, which still serves as the basis of the generally





Günther, Albert C. L. G. 1899. "Complete catalogue of Linné's private collection of fishes, now in possession of the Linnean Society." *Proceedings of the Linnean Society of London* 111, 15–38.

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