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Department of Fishes: Annual Report 1881

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SMITHSONIAN INSTITUTION,

WASHINGTON, D. C., Jan. 18, 1882.

Professor Spencer F. Baird,
Director U. S. National Museum,

Sir;

I beg leave to offer the enclosed report upon the ichthyological collection of the National Museum in reference more particularly to the portion of 1881 from July 1 to Dec. 31, but, incidentally, to the entire year. In this will be found an abstract of the additions to the collection, a statement of the condition of the fishes, a record of work done & proposed to be done, and some recommendations in behalf of the collection. A complete list of the fishes secured at Woods Hole during the summer of 1881 is given, as well as of publications in the Bulletin of the U. S. Fish Commission & Proceedings of the U. S. National Museum for that year. All of which is respectfully submitted.

Yours very respectfully,
Tarleton N. Bean,
Curator of Fishes.

1.

Accessions :

Entries in the fish register, July 1 to Dec. 31, 1881.

The fishes entered in the catalogue ^{during the} within the ^{year} time here specified represent an addition of $\frac{2639}{535}$ numbers, and not less than 240 species. The record extends from 28646 to 29150, both inclusive, and from 29801 to 29830. The large collections of Magellan fishes and those made by Lieut. Nichols, U. S. N., in Lower California and on the west coast of Mexico are now in the hands of Professors Jordan and Gilbert, who are, from time to time, publishing the results of their investigations in the Proceedings of the Museum.

Mr. F. Busse, of Geestemünde, has continued his shipments of fresh fishes from the Baltic for reproduction in plaster by the modeller of the Museum.

The Australian Museum of Sydney, New South Wales, has contributed about 70 species of Australian fishes as a return for collections presented by the U. S. National Museum in 1877 and 18

The United States Fish Commission secured at its Woods Hole station not fewer than 107 species, many of which are new to science. The list fur-

nished herewith will show much that is unexpected and interesting; for example, we have from the western edge of the Grand Bank a species first recorded by F. E. Clarke as occurring at Hokitika, on the South Island of the New Zealand group, in, ^{about} south latitude \times east longitude - the *Lepidopus elongatus* of Clarke, which Goode & Bean have found to represent a genus quite distinct from *Lepidopus*, and for which they have created the name *Benthodesmus*. A species first ^{made} known by Dr. Günther from the Straits of Magellan - *Melanostigma* was found not uncommon

The following European species were obtained: *Centriscus* ^{sp.} ~~scelopax~~, ^{a form} which has reappeared after an interval of 30 years, this being the second individual of the genus taken in our waters; *Careproctus Reinhardtii*, *Centroscyllium Fabricii*, *Cottunculus microps*, *Coryphænoides*, *Hoplostethus mediterraneus*, *Stomias ferox*, until recently unknown in American collections, was secured during the summer at stations.

There are representatives of 6 genera heretofore not known to us and, ^{most of them} probably as yet unpublished; these are *Benthodesmus* (referred to above), a *Protulid*,

Enia (related, apparently, to *Nemichthys* + *Saccopharynx*),
 an eel with some resemblance to *Muraenesox*, a ^{*Gonostoma*} ~~scopelid~~ &
 related
 another ~~&~~, *Sternoptychid*. Besides these novelties, the following new
 species ~~new~~ are in the collection: *Ophichthys* sp., *Ophidium*
 sp., *Physiculus*? two species, *Scorpaena* sp. & *Scyllium*
 sp.

This collection has reached the Museum in perfect
 condition with the exception of some fishes that were injured
 by the trawl and a few others that seem to defy all ^{efforts} ~~pre-~~
~~cautions~~ for securing their preservation. A record was kept
 of the number of individuals of each species taken in the
 different hauls, with a view to learning something about the
 relative abundance of species. A series of distribution sheets
 is completed for all the deep sea forms, taking 50 fathoms
 as the initial depth; in these sheets appear the number
 of the haul, position, date, character of bottom, depth in
 fathoms, proportions of the sexes whenever this could be deter-
 mined, and ^{the} number of individuals. Measurements and
 notes of life colors were obtained for a number of species.

Mr. E. G. Blackford has continued his val-
 uable contributions to the museum, the most noteworthy one
 during the year being a specimen of *Ocyurus Chrysurus*

taken off Long Island.

From Mr. Wm. J. Fisher of St. Paul, Kodiak, were received 12 species of Alaskan fishes.

Mr. Livingston Stone sent a large collection of diseased California salmon which has been forwarded to Mr. John A. Ryder at the Academy of Natural Sciences, Phila., for examination and report.

Messrs. O. & N. Raynor presented an eel from the Potomac river measuring 41 inches in length and 11 in circumference, by far the largest *Anguilla rostrata* in the collection.

From Hon. S. G. North of North Carolina were received several specimens of land-locked salmon, (*Salmo salar*), and a California mountain trout (*Salmo irideus*), both of which have been introduced into the Catawba river by the U. S. Fish Commission.

Dr. Pavey forwarded from Greenland, through the U. S. Signal Office, a small lot of fishes - *Gymnacanthus pistilliger*, *Cottus*, *Cottus scorpius* subsp. *grönlandicus*, *Gadus ogac*, and a charr very much like *Salvelinus fontinalis*.

Lieut. Henry E. Nichols, U. S. N., has sent from British Columbia & Alaska 31 species, all in excellent condition, and embracing a new species of *Gobius* and a new genus of *Cryptacanthidae*.

In a collection of 7 species from the Aleutian Islands made by Mr. Lucien M. Turner was a very large example of Siphonognus barbatus among with other interesting things.

Dr. H. A. Alford Nicholls has presented upwards of 25 species of Dominican fishes, some of which are new to the collection. From the Public Museum of Kingston, Jamaica, has been received a large and valuable lot of fishes representing 154 species entries in the register.

From Mr. E. W. Nelson has been obtained nearly a barrel of Alaskan and Siberian species - a collection especially rich in whitefish and salmon.

Condition of the Collection.

For the most part the fishes in glass jars are in a good state of preservation and alcohol is renewed almost daily on such as are found to need a change. The ^{powder} ~~Heavy~~ tanks are less reliable containers, and their contents are not in all cases well kept. Owing to want of space, kindred species are often widely separated and many species which should be readily accessible are distributed in out-of-the-way places. A complete rearrangement of the exhibition series and separation of duplicate specimens is essential to the well-being of the ^{+ study} ~~increased~~ collection, but this cannot be done effectively until accommodation is at hand.

Work upon the Collection.

The customary rule of attaching numbered tin tags to all new material coming in is strictly followed, and whenever possible, without too great outlay of time, collections are fully identified. Whenever the species cannot, for want of time, be completely made out provisional entries are made until the ~~Curators~~ Museum collaborators find opportunity to study the collections more critically. The want of glass jars proves a serious drawback to the proper



care of collections at present as well as the lack of Agassiz tanks for storage.

Professors Jordan & Gilbert now have the collection of fishes made by the latter at Mazatlan & Panama as well as those taken by Lieut. A. E. Nichols, U. S. N., in Lower California & Mexico. These gentlemen are preparing papers for the Proceedings of the National Museum in which the species are to be described.

In association with the Assistant Director I have prepared descriptions of some of the species collected by the U. S. Fish Commission. I have, also, published descriptions of new fishes from Alaska & Siberia and a catalogue of the entire Alaskan collection.

As usual the work of examining drawings of fishes has consumed an hour or more almost daily.

Some time has been occupied, also, in reading proofs and recording manuscripts for the Proceedings of the National Museum & the Bulletin of the Fish Commission.

Work proposed.

I intend to make a rearrangement of the entire bottle collection as soon as the jars already ordered are received and the increased accommodation for the exhibition series is available. We shall soon begin a card catalogue of fishes now in the museum. Very many specimens set apart for the reserve series will be placed in suitable jars as soon as the jars are furnished. Fishes kept in powder tanks will, ^{to a great extent} be transferred to glass storage jars as soon as possible. Specimens not needed in the ~~reserve~~ exhibition or the study series will be set aside as duplicates for distribution. Several sets of Alaskan fishes are to be prepared for exchange with selected museums.

Mr. Goode and I desire to continue the investigation of the deep sea fauna of the western Atlantic, the fishes of the coast of the southern United States, of the Gulf of Mexico, & of the West Indian region.

I propose to publish a detailed report upon Alaskan fishes and those of contiguous waters, and, should like to reserve for study all of the Arctic

fishes and those of Japan.

Recommendations.

I respectfully urge that the supply of jars, bottles and tanks be largely increased. It is especially desirable to replace the powder tanks by something like the Agassiz tank and to provide a large number of storage jars of heavy glass and of great capacity. I think that when alcohol is renewed on large lots of fish it should contain not less than 70 per cent. of spirit.

I think it is for the interest of the collection to allow no material to leave the museum, as we cannot tell what injury may result from transportation and improper treatment of specimens.

The conditions under which special students may use the collections of the museum should be altered: it is reasonable and expedient that no one should be allowed to monograph families or faunae unless he will agree to complete all the details of work necessary to place the material studied in its finished form upon the shelves where it belongs. There are now many groups of fishes in the collection which have

been made the subjects of special papers and then left in the same condition in which the collaborator found them. Now, if the curator wishes to administer upon

such examples he must devote considerable time to a review of papers ^{before he can} arrange them in harmony with ~~a review of papers in the light of published results,~~ ^{himself} while the student, in much less time could have finished the whole work and left no arrears ~~for us~~ to be disposed of. The curator naturally desires to make studies of some portions of the collection, but he cannot do ~~so~~ much in this direction unless some limitations are placed upon the changes involved by the investigations of ichthyologists who reap the benefit of all the preparatory work done upon these collections without aiding in placing it permanently upon an improved basis.

Species of Fishes obtained by
the U. S. Fish Commission at Woods Holl,
Mass., summer of 1881.

1.	<i>Achirus lineatus</i>	31.	<i>Gadus morhua</i>
2.	<i>Amitra liparina</i>	32.	<i>Gasterosteus aculeatus</i>
3.	<i>Ammodytes americanus</i>	33.	" <i>pungitius</i>
4.	<i>Apeltes quadracus</i>	34.	<i>Glyptocephalus cynoglossus</i>
5.	<i>Aphoristia plagiusa?</i>	35.	<i>Gobiosoma alepidotum</i>
6.	<i>Aspidophoroides monopterygius</i>		
7.	<i>Batrachus tau</i>	36.	<i>Halientæa senticosa</i>
8.	<i>Belone latimanus</i>	37.	<i>Haloporphyrus viola</i>
9.	" <i>truncata</i>	38.	<i>Hemitripterus americanus</i>
10.	<i>Benthodesmus elongatus</i> (Grand Bank) Brofulid	39.	<i>Hippoglossoides platessoides</i>
11.	<i>Carangus chrysus</i> (Newport)	40.	<i>Hoplostethus mediterraneus</i>
12.	<i>Careproctus Reinhardtii</i>	41.	<i>Hyphalonedon chalybeius</i>
13.	<i>Centriscus scolopax?</i>		
14.	<i>Centropristis atrarius</i>	42.	<i>Limanda ferruginea</i>
15.	<i>Centrosyllium Fabricii</i>	43.	<i>Liparis</i> (in Pecten)
16.	<i>Chirostoma notata</i>	44.	<i>Lophius piscatorius</i>
17.	<i>Citharichthys arcifrons</i>	45.	<i>Lopholatilus chamæleonticeps</i>
18.	<i>Conger oceanica</i>	46.	<i>Lophopsetta maculata</i>
19.	<i>Cottunculus microps</i>	47.	<i>Lycodes paxillus</i>
20.	" <i>torvus</i>	48.	" <i>Verrillii</i>
21.	<i>Coryphænoides</i>	49.	" <i>Vahlæi</i>
22.	<i>Cottus æneus</i>		
23.	" <i>octodecim spinosus</i>		
24.	<i>Cyclopterus lumpus</i>	50.	<i>Macrurus Bairdii</i>
		51.	" <i>carminatus</i>
		52.	<i>Melanogrammus æglefinus</i>
25.	<i>Dasybatis centrurus</i>	53.	<i>Melanostigma</i>
		54.	<i>Merlucius bilinearis</i>
		55.	<i>Mola rotunda</i>
26.	<i>Echeneis naucrates</i>	56.	<i>Microgadus tomcodus</i>
27.	<i>Enchelyopus cimbrius</i>	57.	<i>Monacanthus setifer</i>
28.	<i>Enia atrigula</i> (Georges')	58.	<i>Monolene sessilicauda</i>
29.	<i>Eulamia obscura</i>	59.	<i>Muraenoides gunellus</i>
30.	<i>Eumesogrammus subbifurcatus</i>	60.	<i>Muraenesox-like eel</i> (n. g.)
		61.	<i>Mustelus canis</i>
		62.	<i>Myxine glutinosa</i>

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|---------|--|------|---------------------------------|
| 63. | <i>Nemichthys scolopaceus</i> | 100. | <i>Synaphobranchus pinnatus</i> |
| 64. | <i>Ophichthys</i> n. ? s. | 101. | <i>Syngnathus fuscus</i> |
| 65. | <i>Ophidium</i> n. ? s. | 102. | " <i>Peckianus</i> |
| 66. | <i>Oreynus thynnus</i> (E. Dennis) | | |
| 67. | <i>Palinurichthys perciformis</i> | 103. | <i>Tautoga onitis</i> |
| 68. | <i>Paralichthys dentatus</i> | 104. | <i>Tautogolabrus adspersus</i> |
| 69. | " <i>oblongus</i> | 105. | <i>Tetrodon turgidus</i> |
| 70. | <i>Peristedium miniatum</i> | 106. | <i>Triglops Pingelii</i> |
| 71. | <i>Petromyzon marinus</i> | | |
| 72. | <i>Phycis Chesteri</i> | | |
| 73. | " <i>chuss</i> | 107. | <i>Zearces anguillaris</i> |
| 74. | " <i>tenuis</i> | | |
| 75. | <i>Physiculus?</i> n. s. | | |
| 76. | <i>Physiculus?</i> n. s. | | |
| 77. | <i>Pleuronectes americanus</i> | | |
| 78. | <i>Pomatomus saltatrix</i> | | |
| 79. | <i>Poronotus triacanthus</i> | | |
| 80. | <i>Prionotus carolinus</i> | | |
| 81. | " <i>evolans</i> | | |
| 82. | <i>Raia eglanteria</i> | | |
| 83. | " <i>erinacea</i> | | |
| 84. | " <i>laevis</i> | | |
| 85. | " <i>radiata</i> | | |
| 86. | " <i>ocellata</i> | | |
| 87. | <i>Remoropsis brachyptera</i> | | |
| 88. | <i>Rhinoptera quadriloba</i> | | |
| 89. 90. | <i>Scopelus</i> 2 or more species | | |
| 91. | <i>Scopelid?</i> n. g. = <i>Gonostoma denudata</i> | | |
| 92. | <i>Scopaeina</i> n. s. | | |
| 93. | <i>Scyllium</i> n. s. | | |
| 94. | <i>Sebastes marinus</i> | | |
| 95. | <i>Simenchelys parasiticus</i> | | |
| 96. | <i>Stenotomus argyrops</i> | | |
| 97. | <i>Sternoptychid?</i> n. g. | | |
| 98. | <i>Squalus acanthias</i> | | |
| 99. | <i>Stomias ferox</i> | | |