

Drawn to the Sea: Charles Bradford Hudson (1865-1939), Artist, Author, Army Officer, with Special Notice of His Work for the United States Fish Commission and Bureau of Fisheries

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Preface

The biography of Charles Bradford Hudson that follows this preface had its seeds about 1965 when I (VGS) was casually examining the extensive files of original illustrations of fishes stored in the Division of Fishes, National Museum of Natural History, Smithsonian Institution. I happened upon the unpublished illustration of a rainbow trout by Hudson and was greatly impressed with its quality. The thought occurred to me then that the artist must have gone on to do more than just illustrate fishes. During the next 20 years I occasionally pawed through those files, which contained the work of numerous artists, who had worked from 1838 to the present. In 1985, I happened to dis-

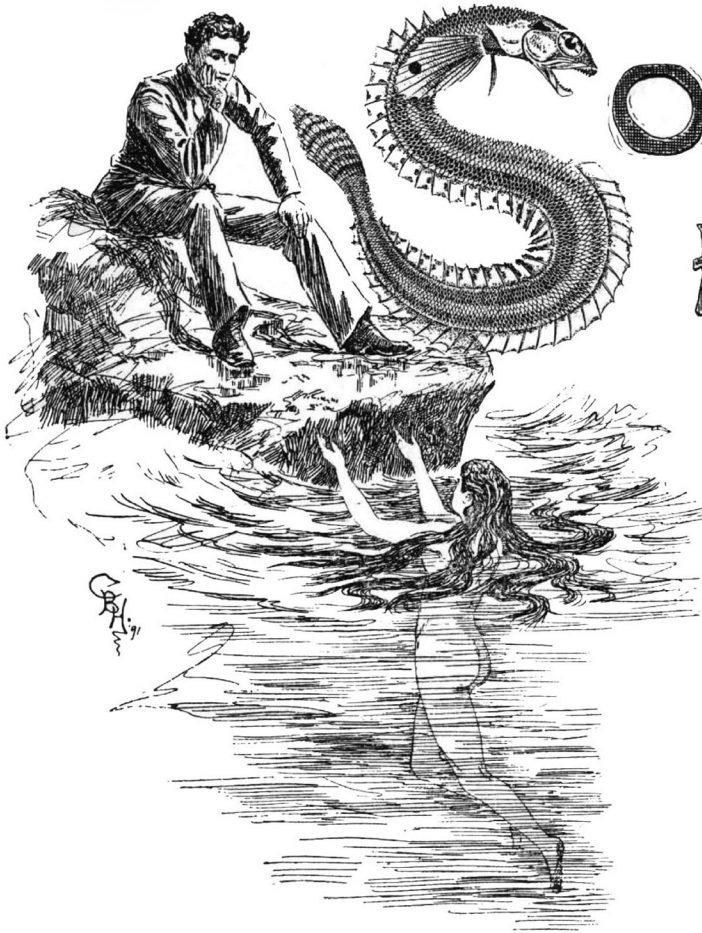
cuss the files with my supervisor, who urged me to produce a museum exhibit of original fish illustrations. This I did, selecting 200 of the illustrations representing 21 artists, including, of course, Hudson. As part of the text for the exhibit, *Drawn from the Sea, Art in the Service of Ichthyology*, I prepared short biographies of each of the artists. The exhibit, with an available poster, was shown in the Museum for six months, and a reduced version was exhibited in U.S. and Canadian museums during the next 3 years.

In the process of obtaining information on Hudson for the exhibit, I came into contact with members of his families, and particularly the daughter of his

second marriage, Claire Hudson Brett. Thus began a period of years during which we exchanged information about her father. She encouraged me to prepare a detailed biography of him, but to her disappointment, I was too busy with my ichthyological research to do that, and we ceased contact in the mid 1990's. When I retired in 2005, I returned to the subject and contacted Claire's son, Hudson Brett, and we began to exchange information about Hudson (Claire was not well at that time). Gradually, I decided to prepare the Hudson biography with the help of my assistant Kristin A. Murphy, and we worked intensively on it beginning about 2007.

It is with sadness that we report that Claire Hudson Brett, who died in 2007 in her late 90's, did not live to see our biography. We, nevertheless, dedicate it to her memory.

Victor G. Springer
December 2009



ong the S of ea.

THE sea-foam is kissing my
lips,
The salt is blown loose thro
my hair,
Through the crest of the waves'
snowy tips,
White hands seem to beckon
me there.

2

O syren from under the main,
Shall I yield to thy luring embrace?--
If I go I shall come not again,
No foot-prints are left to retrace.
And yet this were nothing to dread,
For what to the many is one?--
Like the sand that the storm-wind has spread,
Like the rain on the sea when it's done!

3

O sea, never silent nor sad,
My life offers homage to thee,
In thine arms I would lie and be glad,
In thy bosom find life that's to be!
I yield, then, I go, I depart.
O, spirit that's born of the wave,
Cling close, lovely syren, this heart
Must find a new life or a grave!

Figure 1.—Illustration initialed CBH and dated '91, accompanying poem by Juan Lewis (1892), "The Forging of the Sword, and other poems," (2nd edition). The illustration and first two stanzas of the poem are on page 17 in the book, to which the third stanza from page 18 has been added. Stanzas have been retyped and numbers 2 and 3 added to clarify their positions. The fish in the illustration is not identifiable. The black spot on the pectoral fin appears to be a printing error.

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VICTOR G. SPRINGER and KRISTIN A. MURPHY

Introduction

A life involved with the sea was clearly unplanned in 1882, when Charles Bradford Hudson (Fig. 2), 17, was a student at Columbian College Preparatory School in Washington, D.C. It was during that year Hudson's main instructor, Otis Tufton Mason¹(Fig. 3), an ethnologist who had a close working relationship with the Smithsonian Institution's U.S. National Museum, became aware of his student's artistic abilities. Mason had Hudson prepare a few illustrations for ethnological studies, for which the Smithsonian paid Hudson.² Smithsonian daily account books³ indicate this arrangement continued after Hudson graduated from the preparatory school, in 1883, until at least 1885, when he was in his second year at Columbian College (now George Washington

¹10 Apr. 1838–5 Nov. 1908. Beginning in 1884, Mason became Curator of Ethnology, United States National Museum, and from 1902 he was head curator, Department of Anthropology (Register to the Papers of Otis Tufton Mason by L. H. Coen, revised by K. T. Baxter, 1983, National Anthropological Archives, Smithsonian Institution Archives, unpagin.; reference includes a detailed chronology of Mason's life: <http://www.nmnh.si.edu/naa/fa/mason.htm>).

²Based on the number of square inches (letter from Hudson to his mother, Emma, dated 8 July 1882, quoted in letter, 13 Feb. 1985, from Hudson's daughter from his second marriage, Claire Hudson Brett, to VGS). We learned from Smithsonian account books, that he was paid \$0.50 a square inch for illustrations. The account books show payments only for the period 1882–85, but details of drawings were provided only for the years 1882–84.

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Figure 2.—Charles Bradford Hudson (courtesy of Hudson Brett).

University). We have no information on Hudson's activities in 1886, other than that he was still attending college.

In 1887, Hudson graduated from Columbian College, from which he received awards in mathematics, Greek, and Latin, and he was offered a chair "in the classics"⁴ by the college. His interest in illustrating, however, was greater than his scholarly interests and, opportunely, Otis Mason was in a position to help.

Mason had left the preparatory school in 1884 and joined the U.S. National Museum as curator of ethnology, one of

³Smithsonian Institution Archives, Record Unit 100, Box 88. The ledgers are detailed for 1882–84, but only Hudson's name and a reference to another ledger, which was not found, is present in the 1885 ledger.

⁴In litt., 22 May 1985, Claire Hudson Brett to VGS. We were unable to verify this assertion. Christine H. Kempton (age 96), Hudson's daughter by his first marriage, interviewed by VGS on 3 May, also mentioned that CBH was offered a chair, but was uncertain as to its subject.

the few salaried curator positions in the Museum. The Museum had a growing need for artists, although they were not always so designated. A. Z. Shindler⁵, on the staff since 1876, had worked on many different types of projects. W. H. Chandler was hired on 7 June 1886 to prepare illustrations for ethnological projects, and Mason was able to employ Hudson in June 1887 to prepare illustrations for ethnological and geological studies. The biennially published "Official Register of the United States"⁶

⁵"Antonio Zeno Shindler (~1899) began his association with the Smithsonian Institution in 1876 when he was hired by Spencer Fullerton Baird, then Smithsonian Assistant Secretary, to paint casts of natural history specimens. He continued in various artistic positions with the United States National Museum until his death: SIA RU 7371, historical note. The Division of Fishes illustration files have a number of his original watercolor paintings of fishes, recognizable by inclusion of his distinctive monogram, comprising the letters AZS overlaid on each other.

⁶The following general description of the Official Register of the United States is from the web (10 Feb. 2009), <http://www3.wooster.edu/library/gov/serialset/agency/II/officialregister.htm>: "The Register of Officers and Agents, Civil, Military, and Naval, otherwise known as the Official Register, began publication in 1816 and was made a biennial publication in 1817, reverting to annual publication after 1921. (The dates refer to the latest date covered by the Register, not the imprint date.) The Official Register became known as the "Blue Book" due to its binding in blue roan from 1817 onward. It was originally published by the State Department, but the publication was transferred respectively to the Interior Department, the Census Bureau, and finally the Civil Service Commission; not all issues, however, were published as part of the Congressional Serial Set." The full title of the volume we cite here: Official register of the United States, containing a list of the officers and employes [sic] in the civil, military, and naval service on the first of July, 1887; together with a list of vessels belonging to the United States. Volume 1, legislative, executive, judicial. Compiled under the direction of the Secretary of the Interior, by J. G. Ames, Superintendent

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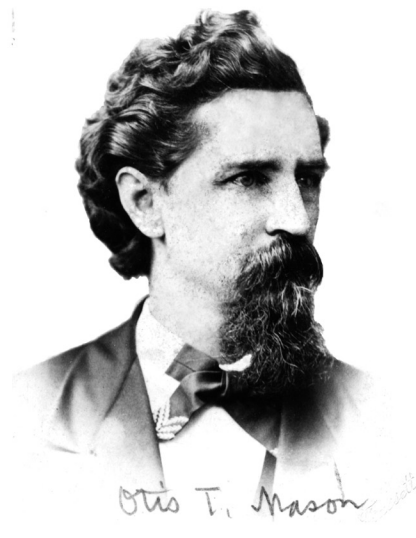


Figure 3.—Otis Tufton Mason, Curator of Ethnology, U.S. National Museum. CBH's instructor at Columbian Preparatory School and supervisor of his first salaried position (SIA image #2009-0006).

lists all Federal employees as of 1 July of the fiscal year covered by the register. In the 1887 edition, Shindler is listed as an “artist,” with a salary of \$110.00 per month. Chandlee and Hudson are listed as “draftsmen,” Chandlee, with a salary of \$75.00 per month, and Hudson at \$40.00 per month.

As soon as Mason was employed by the National Museum in 1884, he began keeping a diary⁷ of the dates worked by the artists he was supervising (Shindler was not among them). On Friday, 10 June 1887, a few days before Hudson's college graduation ceremony, Mason made his first entry relating to Hudson, “Mr. C. B. Hudson came to draw,” and Hudson did so regularly for 3 months, through 15 Sept. 1887, but that was the end—something more attractive had

⁶(continued) of Documents. Washington, Government Printing Office, 1887. It is also listed as House of Representatives, 50th Congress, 1st Session, Miscellaneous document, 87, Part 1. *N.B.* Few, if any libraries, have a complete set. In mentioning other volumes in the series, we use the abbreviated title Official Register of the United States + year; all such references are to volume 1 for that year.

⁷National Anthropological Archives, Smithsonian Institution, Anthropol. Hist. Off., 49033: Diary of Otis T. Mason from 1 July 1884 to 23 May 1891.

presented itself. The diary indicates that Hudson was on leave from 17 to 24 Sept., and from 26 Sept. to 12 Oct. it indicates he was “drawing for Capt. Collins,” who worked for the U.S. Fish Commission. Finally, from 14 Oct. 1887 to 10 Apr. 1888, it indicates “CBH—Fish Commission.” Mason's diary contains no further entries relating to CBH, and it appears that they never interacted again.

Stepping back a few years, in 1883, George Brown Goode (13 Feb. 1851–6 Sept. 1896), director of U.S. National Museum, appointed Captain Joseph William Collins⁸ (Fig. 4) as an unsalaried honorary curator in the Section of Naval Architecture, Department of Arts and Industries, Division of Anthropology.⁹ The appointment, in the same general division as Mason's, explains how Collins came to know both Mason and Hudson. Collins held the honorary position jointly with his Fish Commission position, but the demands of the latter prevented him from devoting much, if any, time to the former, particularly in 1888, when he had just been assigned demanding new duties.

In 1888 the Fish Commission was preparing an exhibit for the Cincinnati Centennial Exposition and had an opening for an artist. Collins was in charge

⁸Collins (1839–1904) was a former captain of the Gloucester fishing schooner *Marion*. We first encountered mention of him in Earll (1880:703) and Verrill (1882:226, 334, 397), mainly as someone providing information on or specimens of, sea life. By 1879, Collins was either working for, or collaborating closely with, the U.S. Fish Commission. By 1883, he was definitely employed, as an “assistant,” with the Commission. In the Official Registers of 1883 and 1885, he is listed as an “assistant” with, for 1883, a monthly salary of \$125.00, and for 1885, with an [unchanged] annual salary of \$1,500.00. In the Register for 1887, he is listed as the captain of the schooner *Grampus*, at a monthly salary of \$150.00, but in 1888, he was placed in charge of the newly created Division of Fisheries, and the Register for 1889 has him as an “Assistant in charge of [a] Division” at a monthly salary of \$200.00. At that time, aside from the Commissioner, he was one of the Commission's two most highly paid employees. He was clearly well schooled, an able writer, illustrator, and draftsman, and if not trained as a naval architect or engineer, he was able to perform outstandingly well in those capacities. He was, additionally, extremely ambitious, and in 1892, failed in his attempts to oust his superior, U.S. Fish Commissioner Marshall McDonald, and become his replacement. Despite attempts by President

continued



Figure 4.—Joseph William Collins, first USFC Assistant in charge of the Division of Fisheries and early supervisor of CBH; designed schooner *Grampus* (SIA image # 2009-0004).

of preparations, and after witnessing Hudson's abilities, he decided to hire him. On 15 Sept. 1888, Hudson began working for Collins in the newly created Division of Fisheries of the Fish Commission (Collins, 1891c:337, 343).¹⁰ According to Collins (1892c: CXIII), Hudson's salary was \$75 per month, and the position apparently only lasted to the end of the fiscal year, i.e. 30 June 1889. We do not know if Hudson's original position with Otis Mason was intended to be permanent or temporary, or if Hudson disliked his assignments, but we believe it most likely that it was Collins' magnetic 87.5% increase in salary that caused Charles

⁸ (continued) Benjamin Harrison, Senator Francis B. Stockbridge (Michigan, chairman of the Senate Committee on Fisheries, and a close friend of Collins), and even McDonald, himself, to keep Collins in his Commission job, Collins resigned his position on 28 Dec. 1892 and took the position of Chief of the Department of Fisheries for the World's Columbian Exposition (a detailed account of what we have abbreviated here can be found in the *New York Times*, 29 Dec. 1892: 5). Collins published on many fishery topics, often historically related, and especially on commercial fisheries and the types and construction of fishing vessels. Based only on his work for the Fish Commission, Collins merits a biography.

⁹R. V. Szary's historical note on SIA, RU 239, National Museum of History and Technology, Division of Transportation.

¹⁰See next page.

Bradford Hudson to be drawn to the sea, and, if license permits inclusion of some lakes and rivers, the sea, directly and indirectly, would have a major influence on him for the rest of his life.

In our text, we frequently use the following abbreviations for the names of people, organizations, or manuscripts:

- CAS**—California Academy of Sciences
- CASA**—California Academy of Sciences Archives
- CAS GSMAEL**—GSMYers/AELeviton Biographical, Historical and Portrait File in the Natural Sciences (located at CAS)
- CBH**—Charles Bradford Hudson
- CHB**—Claire Hudson Brett, CBH's daughter from his second marriage
- CHBMS**—CHB's unpublished manuscript chronology outline "Charles Bradford Hudson," a copy of which she sent VGS in 1985

¹⁰Hudson may have been employed by Collins to fill a vacancy created when Albertus Hutchinson Baldwin (12 Dec. 1865–17 Mar. 1944), an artist employed by the U.S. Fish Commission, left the Commission in 1887 to study art in Paris and Venice, from 1887 to 1889 (*Washington Post*, 7 June 1925:1; Hill, 1909:164). Baldwin was employed by the Fish Commission from 1884 at least until 30 June 1887, at some point in Woods Hole, Mass., but lastly in Washington, D.C. The Official Registers of the United States for 1885 and 1887 list him as an assistant working in D.C., at a salary of \$60.00 per month in 1885 and \$75.00 per month in 1887 (as of 1 July in each year). Baldwin and Hudson probably became acquainted during the 1885–87 period and became reassociated later. Both would illustrate fishes for Evermann and Marsh's (1900) "Fishes of Porto Rico" and Jordan and Evermann's (1905) "Shore fishes of the Hawaiian Islands." Only Baldwin would accompany the USFC expedition to Puerto Rico, but both were together on the 1901 USFC Hawaiian expedition. Baldwin probably intended to pursue a career in the fine arts (four of his paintings are in the permanent collection of the Metropolitan Museum of Art and were viewable on the Internet in 2008), but he found earning a living as an artist to be difficult. Ultimately, he became a bureaucrat, variously working for the departments of Agriculture (1897–1900), Interior (1902–05), Commerce and Labor (1905–06), Post Office (1906–09), Commerce and Labor, again: Census Bureau (1909–10); Bureau of Manufactures (1910–12); Bureau of Foreign and Domestic Commerce (1912–14). He was commercial attaché in London, England (1914–16) (*Washington Post*, *ibid.*), and "later served in a similar capacity at the embassies in Brussels and Paris (*New York Times*, 22 Mar. 1944:19). He left the U.S. Government and represented the British–American Tobacco Company in New York City and later was a vice president of the Guaranty Trust Company in New York (*New York Times*, *ibid.*).

DVA—Department of Veteran's Affairs, Regional Office, Federal Building, 31 Hopkins Plaza, Baltimore, MD 21201. Charles Bradford Hudson files under No. XC or C-2-301-454, which contains a large number of pages referring to his pension, health, military service, and numerous supporting documents. We note that we received these records over a year after requesting them and after our manuscript was in press.

- DULS**—Duke University Libraries, Special Collections
- NAASI**—National Anthropology Archives, Smithsonian Institution
- NARA**—United States National Archives and Records Administration
- SIA**—Smithsonian Institution Archives
- SQBMS**—Sarah Quayle Brett's (CHB's granddaughter) unpublished manuscript "Captain Charles Bradford Hudson Index of Correspondence" sent to VGS on 27 Oct. 1998, and again by CHB's son Hudson Brett, on 24 Oct. 2005¹¹
- SULS**—Stanford University Libraries, Special Collections
- USBF**—United States Bureau of Fisheries (successor as of 14 Feb. 1903 of the United States Fish Commission)
- USFC**—United States Fish Commission
- USNM**—Division of Fishes, U.S. National Museum of Natural History
- VGS**—Victor G. Springer.

In describing the length of a fish, we use the ichthyological abbreviations:

- SL** (standard length)—distance from the tip of the snout to the base of the caudal fin
- TL** (total length)—distance from the tip of the snout to the end of the longest caudal-fin ray

The text is organized as follows: first, we present a more-or-less generalized

¹¹Copies of CHBMS and SQBMS are in the files of VGS held at USNM.

narrative of Charles Bradford Hudson's life as we have been able to learn or infer it. Following the narrative, we present more detailed sections on his contributions that we covered in the narrative, including more description and documentation than we do in the narrative. The sections are in the form of annotated listings of CBH's own publications, the non-ichthyological publications of others that contain his illustrations, a detailed discussion and atlas of his ichthyological illustrations, and a brief but necessary treatment of his "fine art," mostly in support of our thesis that he was drawn to the sea.

Beginnings

Charles Bradford Hudson was born 27 Jan. 1865 in Oil Springs, Ontario, Canada, where his parents were visiting while his father, a newspaperman, was gathering information on the petroleum industry. CBH was the son of Thomson Jay Hudson¹² (22 Feb. 1834–26 May 1903), born in Windham, Ohio, and Emma Little Hudson (Apr. 1844—about Jan. 1908¹³), born in Canada. Thomson and Emma were married in Port Huron, Michigan on 28 May 1861, when Thomson was 27 and Emma was 17. In the 1900 Census, Emma is reported to have given birth to two children, but only one [CBH] is indicated as living.

CBH was descended on his father's side from Edward Hudson, who emigrated from England and settled at Jamestown, Va., in 1607 with Captain John Smith, and on his mother's side from Massachusetts governor William Bradford, who arrived at Plymouth on the *Mayflower* in 1620. Thomson was admitted to the Ohio bar in 1857, but moved his practice to Michigan in 1860, and abandoned it in 1865 for a career in journalism. From 1865 to 1875 he was an editor of a Detroit newspaper, during

¹²Most of the following history concerning Thomson Jay Hudson, is derived from his biographies in: C. B. Hudson (1904:iv–vii); Anonymous (1917:520–521); Malone (1932:341–342); U.S. censuses for 1870, 1880, 1900 (records for 1890 were destroyed and copies are not available).

¹³Inferred from SQBMS and correspondence during mid-to-late 1980's between VGS and CHB.

which time he became politically prominent. He ran for the U.S. Senate in 1866 but was defeated.

In 1877, when CBH was 12, the Hudsons moved to Washington, D.C. There, Thomson Hudson became correspondent for the Scripps Syndicate, supplying news to its five daily newspapers (Detroit, Buffalo, Cleveland, Cincinnati, and St. Louis). He left that position in 1880, and for the next 13 years he was a U.S. patent examiner, being promoted to the position of a Chief Examiner in 1886. In 1893 he published his first book, "The Law of Psychic Phenomena," which sold nearly 100,000 copies during the next 10 years. It has been reprinted many times, most recently in 2007, and it is currently in print.¹⁴ Royalties from the book, and others Thomson would publish, must have been large enough to assure Thomson and his wife a very comfortable living. He, therefore, left his position as patent examiner and devoted his life to publishing and lecturing, very successfully, on subjects similar to those he wrote about in his first book. Thomson and Emma remained in Washington at least until 1900, but by 1902 they had moved to Detroit, Mich. Thompson died in Detroit in 1903 with Emma and CBH attending him. Emma died about 5 years later.

CBH was exposed to a highly charged intellectual atmosphere in his youth. He was surrounded with books in his father's extensive library¹⁵ and he would probably have been present when persons of learning and accomplishment visited his parent's home and discussed ideas and issues of the day with his father. Both his father's intellectuality and ability to earn a living from writ-

ing (as reporter and editor) must have impressed CBH, whose apparently native writing ability was comparable to his ability as an artist. But CBH only authored his first two articles, one about deep-sea fishes and the other about the USFC's intended exhibit for the Chicago world's fair, when he was 28 (in 1893, the same year his father published his first book).¹⁶

Work for the Fish Commission

In his initial full-time employment with the USFC, it is unclear exactly what CBH's contribution was to the Fish Commission's exhibit for the 1888 Cincinnati Centennial Exposition. Collins (1892d:872) merely includes CBH's name among those of many others, in a list of "collaborators" who worked on the exhibition. During 1888, however, CBH spent considerable time illustrating fishing boats, which were a special interest of J. W. Collins, his supervisor and person in charge of preparing the USFC exhibit. Collins had designed and overseen construction of the USFC schooner, *Grampus* in 1886, and Collins (1891b) published a detailed report on the ship's design, construction, and equipment. CBH provided several illustrations for that article, including a line drawing of the ship at sea and illustrations of the *Grampus'* interior (illustrations variously dated 1888 and 1889).

Furthermore, CBH painted a picture, probably in color, of the *Grampus*, which was also dated 1888, and which was either the basis for, or based on, his 1888 illustration in Collins (1891b). The painting was framed and under glass and, quite possibly, was exhibited at the Cincinnati exposition. A reproduction of the painting did not appear in print until 1987 (Backus and Bourne, 1987), almost 100 years after CBH painted it, and then the published illustration was

based on a print made from an old photographic negative, which is present in the files of the Smithsonian's Photographic Services. If the original painting exists, its current location is unknown.

CBH would illustrate other fishing craft and boats during his salaried year with the USFC, which probably ended with the close of the fiscal year in the fall of 1889. Many of these illustrations would be published by Collins (1891a), and one, of the USFC steamer *Albatross*, would be published by Richard Rathbun (1892)¹⁷, a high ranking official in the Fish Commission. Another such illustration appeared in Watkins¹⁸ (1891) and, although not published for the USFC, Watkins' article was published in the Annual Report of the Board of Regents of the Smithsonian. It was an inkwash painting of the "*Savannah*," which, purportedly, was the first steamship to cross the Atlantic under its own power. The painting, dated 1889, is indicated to have been done by CBH under the supervision of J. W. Collins, and both men signed the painting.

Finally, Collins (1901) would publish a fine 1888 CBH pen-and-ink drawing of a British sailing trawler that was included in the 1898 International Fishery Exposition* in Bergen Norway, at which CBH was awarded a silver medal for his "drawings of fishing vessels and boats." He also would receive a bronze medal

¹⁷Rathbun (1852–1918) was trained as a paleontologist. His association with the USFC began as a volunteer in 1874, but by 1875, and until 1878, he was a geologist with the Geological Commission of Brazil. In 1878 he rejoined the USFC as a scientific assistant, and remained on the staff until 1896. In 1897 he joined the Smithsonian Institution, in which he rose, in 1898, to the position of Assistant Secretary, in charge of the National Museum, a position he occupied until his death (SIA, RU 7078, historical note (Anonymous)).

¹⁸John Elfreth Watkins (1852–1903), variously a railroad employee and museum curator. His Smithsonian employment, as honorary curator of the Section of Steam Transportation, Department of Arts and Industries, U.S. National Museum, began in 1885, while he was still a railroad employee. He was promoted to Curator of Transportation in 1887. In 1893, he joined the staff of the Field Columbian Museum, but in 1895 he returned to the Smithsonian where he served in various positions until 1903. (Distilled from W. R. Massa, Jr., undated, Historical Note, SIA RU 7268, q.v., for more detail).

*United States report (Collins, 1901) used the word Exhibition.

¹⁴One web site (<http://www.psitek.net/index2.html>) describes it: "This book explores all areas of the metaphysical world from early philosophies to hypnotism and mesmerism, clairvoyance, visions, right through an overview of the psycho-therapeutic practices. The phenomena of spiritism is [sic] covered in all its [sic] forms including contact with the spirit world as well as case histories of witchcraft, hauntings and possession."

¹⁵His father's house in Washington was "filled with thousands of books on the subject of psychic phenomena." CHB, unpubl. manuscr. (not CHBMS), 28 Nov. 1996 (courtesy of her son, Hudson Brett). We suspect the subjects were more varied than just on psychic phenomena.

¹⁶Based on a letter CBH sent his mother, he may have published illustrations in the "Penny Paper" around the time he was 17 (CHB to VGS, in litt., 10 Feb. 1985). Penny paper was a general term of the period that applied to newspapers or other publications that were sold for a penny or pennies. We were unable to learn which penny paper or what CBH's contribution might have been, and consider the attribution problematic.

for a painting about mackerel fishing that was included in the Exhibition. The painting was not reproduced in a publication and the current location of the original is unknown.

A Short Interruption

On 1 Oct. 1889¹⁹, immediately after completing his work with the USFC, CBH, age 24, married Christine Schmidt, age 19, daughter of German immigrants living in Washington, D.C. We know almost nothing about her, or when and how they met, although she would have a disquieting affect on CBH's life. On 3 Aug. (according to Social Security Death Index) or 21 Aug. 1890 (according to CBH, DVA, Declaration for Pension, 18 March 1927), their first child, a daughter, Christine²⁰, was born. Shortly thereafter, on 4 Nov. 1889, CBH was in New York City beginning 2 months of evening sketch classes at the Art Students League with George deForest Brush²¹ (1855–1941), a promi-

nent, successful artist, who painted in a romantically realistic style. We do not know if CBH's wife was with him in New York.

During CBH's year with the USFC he probably met William Temple Hornaday²² (Fig. 5), who was Chief Taxidermist for the Smithsonian from 1882 to 1889. During 1889 and 1890, Hornaday apparently contracted with CBH to provide illustrations for a book on taxidermy (Hornaday, 1891), which became a bestseller. These illustrations appear to be the first CBH made for pay after leaving salaried employment with the USFC. The contact with Hornaday was to prove quite profitable as Hornaday would go on to have CBH provide illustrations for several of his articles and books, published intermittently until 1906. Hornaday (1899b) published a highly complimentary article about CBH.

Reassociation With the Fish Commission and On His Own

From 1890 to 1892, CBH was again illustrating ships for J. W. Collins, but these were probably done on contract. In 1891, under Collins' direction, CBH published a highly detailed illustration of a merchant sailing ship for "The Century Dictionary"; it was to appear in all editions of the dictionary through the last in 1914.

The year 1891 was an important one in CBH's life. He exhibited his fine art²³, for what may have been the first time, in a show at Washington's exclusive Cosmos Club, followed by another inclusion in an exhibit held in December of the same year by the Society of Washington Artists. Hornaday (1899b) remarked that CBH was an illustrator because he enjoyed the work. That may

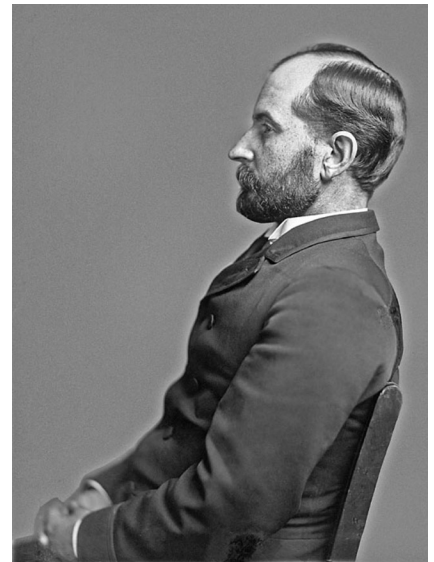


Figure 5.—William Temple Hornaday, first director of the National Zoological Park and of the New York Zoological Society, author (National Zoological Park files).

¹⁹In CBH's posthumous biography (Anonymus, 1941:498-499 + photograph) indicated that the wedding took place on Nov. 3, which is undoubtedly erroneous. The *Washington Post* for 1 Oct. 1889 indicated that their marriage license had been issued, which means it was issued no later than 30 Sept. 1889. According to a sworn statement to DVA by the minister who "solemnized" the marriage, it took place on 1 Oct. 1889, and this is the wedding date often referred to in DVA papers by both CBH and Christine.

²⁰She would attain the age of 103. VGS, on 3 May 1985, interviewed her in her Annapolis, Md., apartment looking out onto Chesapeake Bay. She claimed her greatest pleasure was watching the sailing ships with binoculars. Christine had three daughters (no sons). Aside from Christine, among the sea's indirect draw on the life of CBH, were her brother, Lester Jay Hudson (21 Apr. 1894–4 July 1974), CBH's other child of his first marriage. Lester was a graduate of the U.S. Naval Academy in Annapolis, Md., and retired with the rank of rear admiral. Lester had four sons. His oldest, Allan, also was an Annapolis graduate, still living at this writing (12/2008). Allan had four sons (and four daughters): Patrick, his eldest, is an Annapolis graduate and naval engineer, with a Ph.D. and the rank of commander; Alexander, deceased, was a naval officer (did not attend Annapolis) on a destroyer, and Michael, who was a Navy radioman. Alexander and Michael both served during the Viet Nam war. (Telephone interviews with Patrick J. Hudson, most recent, 17 Dec. 2008).

²¹Emails 7–8 Jan. 2008, from Stephanie Cassidy, Archivist, Art Students League of New York, to VGS. CBH also is reported to have studied with William Merritt Chase at the Art Students League, but there is no record of this. Probably, he studied with Chase in 1914 (see narrative for 1914).

²²1 Dec. 1854–6 Mar. 1937. In 1889 Hornaday became the first director of the Smithsonian's National Zoo, a position he held until 1896. In 1896 he left to become the founding director of the New York Zoological Society (Smithsonian News Service article, Feb. 1989).

²³There is a fine, if any, line of distinction between what is illustration and what we term fine art. In general, illustrations, especially the type that CBH produced, were intended to provide information, and were permitted less freedom of artistic expression than fine art, which is usually intended to appeal to our aesthetic sensibilities.

be, but we assume that illustrating at this early period of his life was probably more profitable and secure a profession for a family man than painting pretty pictures. Ultimately, however, CBH would give up illustrating and restrict his artistic efforts to painting seascapes and landscapes, which we believe was his preferred occupation.

It was also in 1891 that CBH began preparing illustrations of fishing vessels for the USFC exhibit at the World's Columbian Exposition (also known as the Chicago World's Fair) to be held in 1893 (McDonald, 1894:lxxi), and it was the year he illustrated Juan Lewis'²⁴ (1892) self-published little book of poems, from which we took our frontispiece (Fig. 1).

It appears that 1892 was the first year that CBH both illustrated and authored an article. It was published in 1893 (Hudson, 1893a) and concerned

²⁴Pen name of John Woodruff Lewis, 27 May 1835–18 Aug. 1919, poet and novelist, and sometime patent examiner in Washington (source 01/2009: http://www.ulib.niu.edu/badndp/lewis_juan.html) during the same period as CBH's father, one-time patent examiner, who probably introduced CBH to Lewis.

the USFC exhibit for the Columbian Exposition. The article contained a few illustrations of fishes, and, except for our Figure 1, are the first such by CBH that we know of, either for himself or for others. During 1892 and 1893, he illustrated and wrote an article about deep-sea fishes (Hudson, 1893b), and it may have been about this time that CBH came to the attention of Barton Warren Evermann²⁵ (Fig. 6), who had been employed by the USFC in 1891 as an Assistant in the Division of Scientific Enquiry. Evermann would avail himself of CBH's services frequently over the years, involving him as illustrator and participant on two major expeditions, recommending him as illustrator to David Starr Jordan²⁶ (Fig. 7), employing him for many years as a background painter of dioramas at the California Academy of Sciences, where Evermann became director (in 1914), and recommending him as a fine-art artist to Gump's Department Store in San Francisco, which was to be the sole sales representative for CBH's landscape and seascape paintings.

Late in 1893, CBH would again leave his wife and young daughter, this time to study art under W. A. Bougereau at the Academie Julian in Paris. They would, however, join him there, but it could not have been for long, as Christine would give birth to a son, Lester Jay, in the City of Washington, on 21 Apr. 1894, and we presume CBH was with her at the time. During 1893, while in Paris, CBH began preparing illustrations of Parisian scenes, which he used to illustrate his lively article about the Latin Quarter (Hudson, 1894). CBH would illustrate three articles for Hornaday in 1894, and in 1895, he would illustrate and author three of his own articles: one about the work of the USFC (Hudson, 1895a), one about a particular kind of fish for a

²⁵Evermann (24 Oct. 1853–27 Sept. 1932). A detailed biography of Evermann was published by Jennings (1997).

²⁶19 Jan. 1851–19 Sept. 1931; early president of the University of Indiana, first president of Stanford University, world renowned ichthyologist; for a brief biography and a bibliography of his publications see Hays (1952); for his ichthyological importance at Stanford University, see Brittan (1997).



Figure 6.—Barton Warren Evermann, 1899; USFC scientist, 1891–1914; Director, California Academy of Sciences, from 1914 until his death, 1932 (CAS GSMAEL).

children's magazine (1895b), and one about the life history and behavior of several kinds of fishes (1895c). He also provided illustrations for a novel written by Hornaday (1896).

In 1896, CBH was again working contractually for the USFC. During 3–14 Sept. he was at Cape Charles, Va., illustrating fishes in color, and from 24 Sept. to 8 Dec. he was at Woods Hole, Mass., doing the same. With a short break after Woods Hole, from 2 Jan. to 27 Mar., or perhaps 2 Apr. 1897, he was illustrating fishes again, this time in Key West, Fla. Not surprisingly, during these absences, it appears that his wife remained at home to take care of their children. On the other hand, it is surprising that none of these illustrations were included in the USFC exhibit at the International Fishery Exposition in Bergen, Norway. During 1897, CBH prepared illustrations for another novel (Inman, 1898).

Military Service

From 20 Dec. 1888 through 1898, CBH's service with the District of Columbia National Guard (henceforth, DCNG), also referred to in records and reports as the District National Guard and the District Militia, paralleled

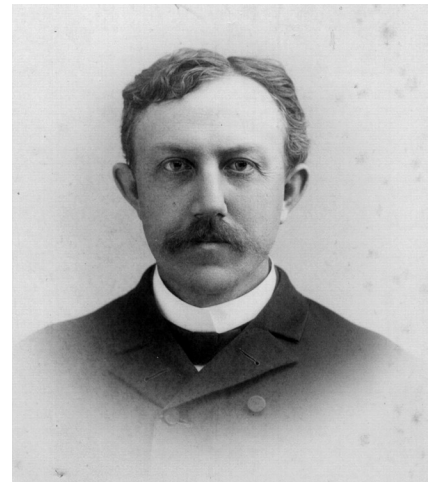


Figure 7.—David Starr Jordan, 1891; noted ichthyologist, first president of Stanford University (CAS GSMAEL).

his other activities. During the Spanish–American War, 1899, the DCNG troops were called to duty and served as the First District Volunteers in the U.S. Army. The records of the DCNG (including those of the District Volunteers) are complex and dispersed among several different archives. There are gaps in the records that probably represent lost or misfiled records, or records in some repository of which we are unaware. DVA contains many of CBH's post-military records relating to his pension applications and amounts, and those devolving onto his wife after his death. His pension was merited only because he served during the Spanish–American War. Also included in DVA are some complete physical exams (more below) and other personal information in supporting documents.

CBH's earliest DCNG military records are deposited at the National Personnel Records Center (henceforth NPRC), in St. Louis, Mo.²⁷ His initial

²⁷According to the website of the NPRC, it has no records prior to those of World War I (ca. 1917), and that records prior to WWI are at NARA in Washington, D.C. We tried unsuccessfully to locate CBH's early records at NARA, as well as at several other non-Federal institutional archives in Washington, D.C. Finally, we called the DCNG office and by chance the lady who answered the phone said, "those records used to be here, but I

continued on next page

enlistment “as a soldier,” no rank given, but presumably as a private, was on 20 Dec. 1888 for a period of 3 years (expiration 19 Dec. 1891).²⁸ Indicating his occupation as “artist” and place of business as “U.S. Fish Commission Exhibit²⁹,” CBH re-enlisted on 2 Jan. 1892 for another 3 years, “unless sooner discharged.” The enlistment period must have ended “sooner,” as there is a record that he was “honorably discharged per S[pecial]. O[rder]. 1, par 1 Series 1893.” CBH next signed an enlistment paper on 20 Dec. 1893³⁰ for another 3 years (“unless sooner discharged”), which would have terminated 19 Dec. 1896. On that paper he gave his occupation as “illustrator” (there was no space provided to indicate place of business on that application). Possibly, as a result of a change in his military status, CBH was again discharged, “S. O. No. 7, par 2, series 1895, and on 9 May 1895 he again enlisted for 3 years, this time as a “Sergeant Major,” giving his [civilian] occupation as “Illustrator and Journalist.” The termination date of this enlistment was given as 9 May 1898 on a separate piece of paper dated 10 May 1895, which indicates he is Sergeant Major, 1st Regiment. This last paper has a handwritten note “Discharge when commissioned to date July 22/95” followed by “honorably discharged per S. O. No. 44, par 1 Series 1895.” On another sheet, dated 26 Jul 1895, CBH is also listed as Sergeant Major, 1st Regiment, with a note, “Transferred to Gen[eral] Non-com[missioned]. staff, by S. O. 34 c.s.”

²⁷(continued) sent them to NPRC a couple of years ago.” She gave us the name and telephone number of the person, William Seibert, she had sent the records to. Seibert informed us that the only pre WWI records at NPRC were those of the DCNG. We obtained copies of those that were available, but the most recent was 19 Dec. 1896.

²⁸We made several unsuccessful attempts to determine what time and training requirements were required of National Guard enlistees in the late 19th Century. Most training was probably done on weekends and evenings, and at some time during the year there was a short period of bivouacking. Undoubtedly training at least included learning to take orders, marching, handling arms, and target practice.

²⁹Probably an indication of his working on the Cincinnati Centennial Exposition.

³⁰Soon after this date, CBH must have departed for Paris, where he remained for a few months.

The only information we have of CBH’s military service between 26 July 1895 and 16 May 1898 is indicated in papers in possession of CBH’s family.³¹ They list two records, the first is dated 26 Aug. 1895: “War Department, Adjutant General’s Office, Washington: Commission of Adjutant of the First Regiment of Infantry of the Militia of the District of Columbia; endorsements (2 pages);” and the second, dated 6/03/1897: “Headquarters of D.C. Militia letter regarding commission as Captain & A.DC [aide-de-camp] (1 page).” An article in the *Washington Post* (1 Dec. 1900:9) included an announcement of CBH’s resignation from the “District Guard,” stating that he was “on the general staff since July 3, 1895.”

Records of CBH’s service during the Spanish–American War were available to us and date from 16 May 1898³², when that organization was mustered into the U.S. Army, as the 1st Regiment, District of Columbia Infantry [U.S. Army Volunteers], commanded by Colonel George Herbert Harries, during the war. On that date, CBH was listed as first lieutenant, Company K; however, a chronological sheet accompanying his records indicates, “May 30 commission as 1st Lt, 1st D.C. Vols.” He served in that position during the time (beginning 14 July) his unit participated in the Siege of Santiago, Cuba. A fortnight later, 29 July, he was entered on the list of sick and wounded as having “Intermittent Fever” associated with “Jaundice.” We assume that he had been infected with yellow fever, which was epidemic, and often fatal, during the War. CBH would

³¹The information presented here is all that was available to us. It is contained in SQBMS.

³²Information concerning CBH’s military records during and after the Spanish–American War were obtained from NARA (Washington, D.C.), Archives Records Center, Old Military and Civilian Records, Spanish–American War, Carded Records, Volunteer Organizations, 1 D.C. Infantry, Charles B. Hudson; identifying numbers: 41091797, 41091874, 41092021, 41092168, 41088244, 41088282, 41088283; 41093565, 41093573, 41093586, 41093013, 41093032, 41093052; also, NARA, Archives Records Center, General correspondence of the Adjutant General’s office, 1890–1917, Hudson – HUGHEN: 351005, 353858, 363439.

suffer from its effects for several years. On 1 Aug. 1898, 3 days after being diagnosed, and undoubtedly as a result of the fever, he was “Transferred . . . from Company K to be Adjutant 2nd Battalion” (the Regiment comprised three battalions), a staff position probably requiring less physical stress than that of an officer with direct command responsibility. He remained in that capacity until he was mustered out of the Army on 20 Nov. 1898. After mustering out, he returned to his status in the District National Guard, reverting to his pre-war rank of captain and as aide-de-camp to Harries, who also returned to his pre-war rank as brigadier general.

The *Washington Post* (9 Sept. 1898:4) has a full page of drawn portraits, probably based on photographs, of the “Officers who led the District heroes.” They are predominantly full faced and hatless, and include one of CBH (Fig. 8, right) with a handlebar mustache. Hornaday (1899b:449) provided a photograph of CBH in uniform, which we reproduce as Figure 8, left.

On 20 Nov. 1900, CBH resigned his commission in the D.C. Guard, and on Nov. 26 his resignation took effect. Between Dec. 1900, and early Feb. 1901, CBH applied for appointment as a second lieutenant in the regular U. S. Army. Several letters of recommendation, including that of General Harries³³, on his behalf, were received by the War Department, Adjutant General’s Office. On 9 Oct. 1902, CBH was notified that he was ineligible for appointment because these appointments were limited to men from 21 to 27 years of age; CBH was 37.

³³Harries recommended five men for commissioning, which he listed in order based on his opinion of their merits. CBH was third. Harries general recommendation for all five read, “All of the gentlemen named served in the District of Columbia quota during the war with Spain, and each one of them is of that type of soldierly manhood which should be essential to the possession of a commission in the regular establishment. Each of them is fully capable of attending to any military duty, either in the line or staff.” His particular recommendation of CBH read, “Mr. Hudson was one of the most industrious and painstaking of those who rendered such excellent service in this country, and through the siege of Santiago, and during the prolonged struggle with disease until the day of muster out.”



LIEUT. CHARLES B. HUDSON.
(First Lieutenant and Battalion Adjutant.)

Figure 8.—CBH, first lieutenant, First District Volunteers, during Spanish–American War, 1898: left, from Hornaday (1899b:449); right, from *Washington Post*, 9 Sept. 1898, p. 4 (Proquest Historic Newspapers).

We find CBH's persistence to have a military career of particular interest, and hazard the opinion that he was driven to affirm his masculinity. In conversations with VGS, both his daughters stressed his small size and slight build. His military records during the Spanish–American War describe him as being 5 ft. 5½ inches [1.66 m] tall, of light complexion, with blue eyes and brown hair. A DVA medical exam record dated 5 Jan. 1938 (roughly 40 years later and 18 months before his death) describes him as being 5 ft 4¼ inches [1.63 m], weight 117 lbs, stripped [53.2 kg], highest weight in past year, 135 lbs [61.4 kg]; cardiovascular system abnormal: “all arteries are hard, beaded and tortuous,” appendectomy scar, all upper jaw teeth absent, lower jaw lacking 12 teeth, but “dentures satisfactory.” And concluded, “Claimant is 100% disabled to perform manual labor due to his arteriosclerosis . . .” Various other records indicate his height as 5'6" [1.68 m] and 5'8" [1.7 m], but these were not associated with medical exams and are probably inaccurate. An age related decrease in height from 5 ft. 5½ inches to 5 ft 4¼ inches over a period of 40 years, seems reasonable, especially if there was associated osteoporosis.

Henceforth, as a result of his military service, CBH was frequently addressed or referred to as Captain Hudson by his friends and colleagues.

Return to Washington, D.C.

On return to the United States, CBH's unit was stationed at Camp Wikoff, N.Y., a demobilization and quarantine camp established Aug.–Sept. 1898 for troops returning from the Spanish–American War.³⁴ By 12 Sept., CBH was back in Washington, D.C. He appears to have returned to his family then, but by November he left them and moved into his father's home on Capitol Hill, in which he would reside until he left for California in the spring of 1901. Although, he would have close relations with his children, it appears that he never saw his wife again.

CBH now entered what was probably a difficult period of his life. Suffering from the ill effects of yellow fever and the emotional stress of separating himself from his children, if not from his wife, he produced only a few magazine illustrations in 1899 and published no articles

³⁴New York State Military Museum, http://dmna.state.ny.us/forts/fortsT_Z/wikoffCamp.htm (15 Dec. 2008).

of his own (nor would he until 1903). He produced few, if any, illustrations of fishes during the year, as we imply in the section on “CBH's Ichthyological Illustrations” (see date illustrated for illustrations P03239, P03416, P06885, P09663, P10343, P15116).

By 1900, CBH was busily at work again. He prepared several illustrations, published in 1902, for the reports of several of the scientists who participated in the Harriman Alaska Expedition of 1899.³⁵ The original of one of these illustrations, a small oil painting of sea lions, hung in the E. H. Harriman home for many years, but its whereabouts have been unknown since about 1993. CBH completed a few magazine illustrations during 1900 and a series of pictorial identification labels for the bird exhibit of the New York Zoological Society, of which his friend Hornaday was the director and probably the source of his employment (CBH apparently did this work in New York³⁶). In late 1900, CBH was awarded a bronze medal for his paintings of fishes, which had been included in the Paris Exposition Universelle (World's Fair).

On 29 Dec. 1900, the first publication of CBH's ichthyological illustrations would appear (Evermann and Marsh, 1900). These included colored lithographs of the paintings he had made mostly in Key West, Fla., in 1896, and pen-and-ink illustrations made in either 1899 or 1900.

In early Jan. 1901, Christine Hudson brought her first suit for divorce, claiming CBH deserted her in 1898.³⁷

³⁵The Harriman Alaska Expedition was organized by E. H. Harriman, a railway magnate and financier, to explore the coastal waters and territory of Alaska. The expedition extended from 31 May to 30 July 1899, during which thousands of documentary photographs were taken. The scientific findings were published in 14 volumes, issued between 1901 and 1914. Harriman published the first two volumes, but then turned the copyright over to the Smithsonian Institution, which published the remaining volumes and reissued the first two volumes under its own imprint. Several prominent scientists participated in the expedition: John Burroughs, Edward S. Curtis, William E. Ritter, G. K. Gilbert, George Bird Grinnell, William H. Dall, Clinton H. Merriam, and John Muir.

³⁶CHBMS

³⁷The *Washington Post*, 9 Jan. 1898, p. 10 (Proquest Historical Newspapers).

West to California and Beyond

Hawaii became a territory of the United States on 22 Feb. 1900. By Act of Congress, 20 Apr. 1900, the Commissioner of the USFC was “empowered and required to examine into the entire subject of fisheries ... in the Territory of Hawaii ...” (Smith, 1902:123). The Commissioner placed the investigations under the direction of D. S. Jordan, then President of Stanford University, and B. W. Evermann, ichthyologist, with the Commission (Smith, 1902:124). The artists selected to go on the expedition to Hawaii were CBH and A. H. Baldwin, both of whom had previously prepared illustrations of fishes for Evermann

The expedition was scheduled to begin in June 1901. Apparently, in early March 1901, Jordan had written Evermann requesting that CBH illustrate certain species of fishes and offering CBH an “appointment [without pay] as associate artist in the Hopkins Laboratory,”³⁸ located in Pacific Grove, Calif., when CBH came out to California. Hudson accepted with alacrity, but his response puzzles us. In it (dated 15 Mar. 1901) he indicated that he will leave for California as soon as he could arrange his affairs, “I have an order from the U.S. Fish Commission for three drawings in color which will probably require between two and three weeks to complete ...” We do not know of any CBH USFC paintings in color done in 1901 other than those prepared during his participation in Jordan and Evermann’s expedition to Hawaii.

CBH departed Washington, D.C., for California, probably arriving sometime in mid Apr. or May, 1901. By the first of June, he was on the boat for Hawaii together with the rest of the expedition’s participants, and some other folks (Fig. 9). Among them was Claire Grace Barnhisel (in the future usually known as

³⁸SULS 058, Series IA, D. S. Jordan, Box 28, Folder 280, 18 Mar. 1901, CBH to D. S. Jordan; SULS 058, Series IAA, D. S. Jordan, Box 2, Folder v.3, 21 Mar. 1901, D. S. Jordan to CBH. Jordan mentioned that he still had 175 new species of Japanese fishes to be illustrated and “So far as I can see there is likely to be all the work you can do for a long period, perhaps several years.”

Grace), a Stanford University graduate, on her way to Hawaii to teach school. Two and one-half years later (9 Dec. 1903), CBH (38) and Grace (32), born 29 Oct. 1871, would marry.³⁹

CBH painted Hawaiian fishes from life from early June to late July 1901, at which time he and the other members of the expedition returned to California. An article in the Honolulu *Evening Bulletin*, 8 July 1901, described him at work: “Hudson’s studio is an interesting den. It is not in at [sic] attic nor under a eucalyptus tree. He is perched on a bench at the outer end of the pier seaward from the Moana hotel. He has before him a glass aquarium, full of sea water. Here he poses his models.” The article also mentions that it took CBH a week to complete each illustration (Fig. 10).

The fishes he illustrated were published in Jordan and Evermann’s (1905) study of the shore fishes of the Hawaiian Islands. They would be reproduced in postcard format, though suffering in quality, in several editions over the years by the Waikiki Aquarium⁴⁰, and four would also be reproduced as postcards by the Steinhart Aquarium, San Francisco, about 1923.

On his return to California from Hawaii in Aug. 1901, CBH resumed preparing illustrations, probably for D. S. Jordan’s studies of Japanese fishes. In August, the first filing of Christine Hudson for divorce was dismissed “without prejudice,” but a second filing was made about 20 Aug. It alleged that CBH had left his home in November 1898, and had been absent for more than 2 years.⁴¹ The divorce was granted 21 Nov. 1902 (DVA copy of divorce

³⁹DVA contains a copy of their marriage license, which, based on handwriting, appears to have been filled out by CBH. On it, he gives his age as 38 and hers, erroneously, as 30. We obtained her birth date, which she included in a letter, 7 May 1944, she wrote to DVA.]

⁴⁰These reproductions also included the color paintings of fishes that A. H. Baldwin produced on the expedition. Baldwin worked in watercolor, CBH in oil on academy board. (See also footnote 92 for more information on the postcards.)

⁴¹*New York Times*, 20 Aug. 1901, p. 10. The article also indicated that she was the sole support of her daughter, but that CBH’s parents had contributed partly to the support of her son.

decree), in which it was specified that CBH’s wife would have custody of their daughter, Christine, during her minority, but allowing CBH to have her visit him for 2 months each year. Similarly, CBH was granted custody of their son, Lester, but allowing Christine to have him visit her for 2 months each year.

At some period during 1900–01, CBH’s parents would move from Washington, D.C., to Detroit, Mich.

On 4 Feb. 1902, CBH, in Pacific Grove, wrote J. O. Snyder⁴² at Stanford that he was working “seven days in the week” and that “... my health, which I have never fully recovered since the war, has been better here than in any other place.”⁴³ He wasn’t only drawing fishes, however, as in March he began working on his first novel.⁴⁴ On 22 Apr. 1902, A. H. Baldwin, who was at Stanford University illustrating fishes, wrote Dr. Hugh M. Smith, soon to be the first Deputy Commissioner of Fisheries, “Hudson is here now and looks very well. He enjoys California more than I do I think, and expects to stay here some time I believe.”⁴⁵ Baldwin’s thinking was spot on! From that time until his death in 1939, CBH would make California, mostly in Pacific Grove, his permanent home. Probably, contributing to his initial desire to stay, we presume, was a blooming romance between him and Grace Barnhisel, enhanced when his wife’s divorce decree was granted.

About 12 Feb. 1903, however, CBH had been called to Detroit to help his mother attend to his father, who had serious health problems.⁴⁶

⁴²J. O. Snyder, 1867–1943, spent most of his professional life as a professor teaching ichthyology and fisheries biology at Stanford University. Hubbs (1943:265) and Brittan (1997) include information about him.

⁴³SULS SC058 IA, D. S. Jordan, Box 28, Folder 305.

⁴⁴CHBMS.

⁴⁵NARA RG 106, Smithsonian Institution, Hugh M. Smith, Box 5.

⁴⁶Information for the period 12 Feb.–11 Oct. 1903 is contained in letters between Jordan and CBH in SULS SC058 IA, D. S. Jordan, Box 36, Folders 352, 353, 355, 357 and Box 37, Folder 368, and SULS SC058 IAA, D. S. Jordan, Box 6, Folders 11 and 12, Box 7, Folders 13 and 14, and Box 9, Folder 17.



Figure 9.—Members, in part, of Evermann and Jordan’s expedition to the Hawaiian Islands, Nuuanu Pali, 12 June 1901. Back row from left: Charles Bradford Hudson, Edmund Lee Goldsborough (USFC, Evermann’s assistant), Michitaro Sindo (Jordan’s assistant). Front row from left: Albertus Hutchinson Baldwin (artist), Barton Warren Evermann (USFC), Grace Barnhisel (CBH’s future wife, recent Stanford University graduate, not an expedition member), Knight Jordan (age 13, Jordan’s son), David Starr Jordan, Alvin Seale (curator of fishes, Bishop Museum), John Treadwell Nichols (age 18, volunteer, future curator of fishes, American Museum of Natural History). Photograph by John N. Cobb (USFC statistician, in charge of expedition arrangements) (DULS, E. L. Goldsborough file).

CBH had taken specimens with him, which he was illustrating as time permitted, and Jordan repeatedly importuned him to finish them so that he could submit his papers for publication. CBH remained in Detroit, and on 26 May 1903, his father died. CBH would stay on in Detroit until at least November to help settle his father’s estate and also to write a biography of his father and preface for his father’s posthumous book, “The Evolution of the Soul and Other Essays,” 1904.

By early Dec. 1903, CBH was back in California, and on 9 Dec. 1903, he and Claire Grace Barnhisel were married in San Jose.⁴⁷ They would make their permanent home in Pacific Grove, building a house in 1910 at 317 Alder Street

⁴⁷His first wife, Christine, was granted a divorce in 1902 and she would remarry in 1903 (*Washington Post*, 4 Aug. 1903, p. 3), to Guy N. Collins (1872–1938), prominent chief botanist for the U.S. Department of Agriculture, Bureau of Plant Industry (*New York Times*, 16 Aug. 1938, p. 19). They would remain married until he died. Information from ProQuest Historical Newspapers.

and, with occasional extended absences would live there until CBH died in 1939 and his wife moved away in 1941 (in litt., 6 Jan. 1941, Grace B. Hudson to DVA). It was in the Alder Street home that they would raise their two children, Bradford Benedict and Claire Barnhisel, and Lester, son of CBH’s first marriage. By 1926, CBH would build or acquire a separate studio at 440 Asilomar Avenue (from the Spanish, *asilo*, a refuge + *mar*, sea, hence, refuge by the sea), less than a mile (1.61 km) from their home, near to, and with an unimpeded view of, the

Pacific (Fig. 11).⁴⁸ After Grace, 93, died (1964), or perhaps some years earlier, the Alder Street home was sold, but today the entranceway bears a Pacific Grove historic marker, “Grace Hudson 1910.” The studio remains in the family and the ashes of Claire Hudson Brett, are spread on the grounds around a tree.⁴⁹ CBH was also cremated, and his ashes, presumably, were similarly dispersed. The ashes of his son, Rear Admiral Lester J. Hudson, were dispersed at sea off Point Lobos, Calif., a favorite subject for CBH’s paintings (Fig. 12, 13).

From Lake Tahoe to the Golden Trout of the High Sierras

In the spring of 1904, Stewart Edward White⁵⁰, a prominent author who had visited California’s Sierra Nevada Mountains in 1903, wrote President Theodore Roosevelt of his concern for the preservation of the golden trout, *Oncorhynchus mykiss aguabonita*, of the High Sierras. It was considered to be the most beautiful of all trout species. It had a limited distribution and it was easily caught by trout fishermen, who could fish it to extinction. Roosevelt contacted George Meade Bowers⁵¹, fifth

⁴⁸Although the geographic position of the studio remains the same, the original short driveway to the studio from Asilomar was allowed to become overgrown and blocked, and a long, two-track dirt road leading off Sunset Drive on the opposite side of the studio is now the entryway to the property. Sunset Drive is the closest road between the studio and the Pacific Ocean. Today, there is no street number posted for the studio on either Asilomar Avenue or Sunset Drive. The driveway entrance on Sunset Drive, however, is between addresses 1642, to the south, and 1600, to the north. One can still just discern the remains of the short, original Asilomar driveway of the studio in an aerial photograph that was available on the web during 2009.

⁴⁹Telephone interview, by VGS, 21 July 2008, with Cmdr. Patrick J. Hudson, great grandson of CBH’s first marriage.

⁵⁰12 Mar. 1873–18 Sept. 1946, novelist, adventurer, and conservationist, one of a select few made an Honorary Scout by the Boy Scouts of America. Barton Warren Evermann (1906:20) named *Salmo whitei* [= *Oncorhynchus mykiss whitei*] in recognition of White’s effective concern about the preservation of the golden trout.

⁵¹13 Sept. 1863–7 Dec. 1925, Commissioner 1898–1913, U.S. Representative from 2nd District, West Virginia, 1916–1923. For an interesting statement about his initial appointment see the *New York Times*, 2 Feb. 1898, p. 3.



Figure 10.—Charles Bradford Hudson at work in his “studio” on a dock in Oahu, during 1901 Evermann–Jordan expedition to the Hawaiian Islands (note Diamond Head in background). Photograph by John N. Cobb (DULS, E. L. Goldsborough file).

U.S. Commissioner of Fisheries, who wrote White on 22 Apr. 1904:

Dear Sir:

I have received a letter from the President in which he calls attention to the golden trout of Mount Whitney, concerning which he states that he has received a letter from you. It affords me pleasure to inform you that this Bureau is alive to the interest attaching to this beautiful trout and has already taken steps toward its preservation. During the summer an investigation will be made for the purpose of determining in just what streams it is now found and what steps may be taken for its preservation and wider distribution.

Bowers appointed Barton Warren Evermann to head the investigation of the golden trout, which was known from Volcano Creek⁵² in the Kern River region of the High Sierras, an area of rugged terrain, deep canyons with vertical walls, streams, waterfalls, and meadows, among mountains reaching heights well over 10,000 ft (3,048 m), with Mt. Whitney having the highest peak (15,505 ft, 4,421 m) in the contiguous United States. Evermann knew that an expedition into such wilds to make a biological study of a fish would

⁵²The Volcano Creek of Evermann (and as used by us in the above discussion) is today called Golden Trout Creek, and a southern tributary, which flows through a boulder field before joining Golden Trout Creek, is now designated Volcano Creek. The golden trout in Golden Trout Creek is still an isolated pure population (Robert J. Behnke, email to VGS 23 Jan. 2009).



Figure 11.—CBH's studio at 440 Asilomar Avenue, Pacific Grove, Calif., and view of Pacific Ocean from driveway leading to studio from Sunset Boulevard (Oct. 2008). Photographs courtesy of Monica Hudson.

require several weeks, much equipment, and pack animals to carry the supplies, personnel, and equipment.

Among the personnel he wanted were scientists with differing specialties, assistants, packers, a cook, and a competent artist to capture the life colors of what was considered to be the most beautiful trout in the United States. Trout fishermen in the early 1900's were just as avid about their sport and prey as they are today, and the Bureau sought to make every effort possible to learn about and to protect such an attractive fish, no less than how to satisfy Theodore Roosevelt.

Evermann put together a team of 10 people, which included, beside himself: Oliver Peebles Jenkins, (1850–1935), professor of physiology and histology, and Rufus L. Green (3 Mar. 1862–19 Nov. 1932), professor of mathematics, both of Stanford University; Chancey Juday (5 May 1871–29 Mar. 1944), then professor of zoology (limnologist, freshwater planktonologist) of the University of Colorado; and three assistants, two packers, a cook, and, last but not least, the artist, Charles Bradford Hudson.

But first, there were the moderately complex problems involving the genteel art of financial negotiations and overcoming what appears to have been a budgetary obstacle to the Bureau of Fisheries' paying CBH's transportation expenses from Michigan to the expedition's origination point in Visalia, Calif., and probably those of Chancey Juday, who was in Colorado.

Sometime before May 1904, CBH, with his wife, had returned to his mother's home in Detroit and Evermann had written him there requesting him to participate in the expedition to the Sierras. On 1 May 1904, CBH replied⁵³:

⁵³The remaining narrative includes extensive quotes from letters exchanged between CBH and Barton Warren Evermann. In general, we thought it best to let these men speak for themselves. What is omitted from the incompletely quoted letters, even when the body of the correspondence might be quite businesslike, are the men's friendly closing comments concerning their respective families, or invitations to visit and reside in their homes. Formality of the day, however, always reigned: it was always Dear Captain or Mr. Hudson, and Dear Professor or Dr. Evermann.



Figure 12.—“October afternoon, Pacific Ocean near Carmel, Calif.” Oil on canvas, signed lower left, no date, dimensions not provided. Claire H. Brett family collection. (Photograph courtesy of late Claire H. Brett). Could this scene have been from CBH's studio (see Figure 11)?

Dear Professor Evermann,

Your very kind favor of offering me the opportunity of a trip into the Sierras next summer is at hand, and makes me regret more than ever that I am not in California. It appeals to me a lot. There is little possibility, however, that I shall go west before next winter—if, indeed, I go then. But if I were there I should certainly accept your proposition, not only for the sake of the chance to paint the trout, but for the outing with you and Dr. Jenkins. I thank you for the invitation. I infer that the Fish Commission would not pay my expenses from a point as remote as this. If that could be arranged I should be very much tempted.

On 25 May 1904, Evermann included the following comment in a letter to Jenkins, “Our party, so far as provisionally determined, will include [a list of participants follows]. To these I would add Hudson, if he were on the coast, for the Golden Trout of Mount Whitney surely ought to be done in colors and Hudson can do it beautifully. He may be willing to go anyway.”

Also, on 25 May, Evermann wrote CBH in response to CBH's May 1 letter:

My dear Mr. Hudson:

I am awfully sorry you are not on the coast; for I would like mightily to have you go with me to beard the Golden Trout in its native waters. And I would be pleased if *some way* [emphasis ours] could be arranged by which you might be induced to go. I regret that there is so little money available for this investigation; but as there are so few fishes in that region available for painting, the Bureau could not offer the compensation which you should have as an artist. The best that I can offer is a most delightful trip into America's wonderland, which I was sure would appeal to you. I can assume all our expenses while in the field. Now how much toward your other expenses (getting to Palo Alto, etc.) would induce you to go? If it is not too much, I'll try hard to raise it. There are special California rates which we might strike. My idea is to start as early in July as possible and



finish up sometime in August, I hope not later than the 10th.

It appears that CBH had not received Evermann's 25 May letter before 2 June, when CBH wrote him the following:

My dear Professor Evermann:

I have been thinking very hard about your proposed trip, and confess it is a great temptation; but I really do not feel that I can afford my part of the expense. I wish very much that I could do so, for I appreciate the value of the opportunity, to say nothing of the pleasure of bashing my shins on the Sierras with you and Doctor Jenkins. I would be glad to give you my time and would be willing to travel tourist or any other old way, but my expenses have been rather heavy this winter and I am pretty nearly as hard up as our Uncle Sam. I am sorry that I can not give you a more favorable reply. If I were in Palo Alto I would not hesitate a moment. Is it quite impossible for the office to furnish transportation?

Two letters were sent to CBH, both dated June 7, that allows us to understand how Evermann solved CBH's transportation problem and, perhaps, permits us to hazard a guess as to why CBH's three paintings of the Lake Tahoe cutthroat trout, made before the Sierra expedition, were never published by either Evermann or D. S. Jordan, both of whom published extensively on California salmonids. The first 7 June letter reads:

Captain Charles B. Hudson

Sir:

You are hereby appointed a temporary assistant in this Bureau and assigned to duty in connection with the study of the statistics and methods of fisheries of the interior waters of California. Your compensation, until otherwise



Figure 13.—Two Charles Bradford Hudson paintings of Point Lobos, Calif., both signed lower left, no date. Upper, 15×13 in (38×32 cm), oil on canvas board, private collection. Photograph courtesy A. Bales. Lower, 28×26 in (71×66 cm), oil on canvas. Photograph courtesy Neville–Strass Collection.

ordered, will be at the rate of sixty dollars per month. Your actual and necessary expenses while engaged upon this work will be refunded to you upon the presentation of properly executed vouchers. At your earliest convenience, you will proceed to Lake Tahoe, where you will report to Professor Chancey Juday.

Respectfully,
Geo. M. Bowers
Commissioner

The other letter was written by Evermann. We did not find a copy of Evermann's response to CBH's letter, which Evermann stamped "Answered June 7 1904," among the CASA Evermann files. A copy of that letter, however, is mentioned in SQBMS, with a brief descriptive note of its contents. The note reads (bracketed inclusion is ours), "Barton Evermann letter to CBH informing him to proceed to Lake Tahoe and report to Professor Chancey Juday to render assistance and paint four species [specimens?: male and female of each of two species?] of trout: the Pogy or Snipe (*Salmo henshawi*) and the Silver Trout (*S. tahoensis*)—be sure to save and tag specimens" *Salmo henshawi* is now considered to be a valid, but extinct, subspecies of the cutthroat trout, *Oncorhynchus clarkii*. *Salmo tahoensis* is now considered to be a junior synonym of *Oncorhynchus clarkii henshawi*.

It appears that there were funds to hire an assistant for a study of statistics and methods of fisheries, but not for an artist to illustrate fishes. Whether Bowers was aware of the content of Evermann's letter is unknown, but it might have been embarrassing for a copy of Evermann's letter to be available in the files. In any event, under the guise of working on a research project as an assistant to Juday, CBH would receive pay that would be adequate to cover his transportation to Lake Tahoe and to the expedition starting point in California. As for the Tahoe paintings, neither Evermann nor Bowers would

have wanted to call attention to their provenance, so they sat in the USFC files unutilized until well after the death of everyone concerned.

CBH replied to Evermann's June 7 letter on 9 June 1904:

My dear Doctor Evermann,

Your letter of instructions and my marching orders came this morning. I will leave for California on the 11th—the day after tomorrow via So. Pac. to Tahoe. The compensation mentioned in the orders comes as a very agreeable surprise for it was quite unexpected. I thank you very sincerely.

I am taking a good supply of materials and will work in watercolor, as I find it much more speedy than the oil, and consider it quite as effective for fresh-water species, whose markings are not usually elaborate. I would be very glad, if you can do so, if you will send the large proportional dividers⁵⁴ which I used before. Mine are too small for convenience. However, I will take them along. Could you not send the F. C. [Fish Commission's] proportionals to Prof. Juday?

Mrs. Hudson sends her greetings, but tells me to say that she does not consider it a bit nice that she has not been invited. She would like to go, but declines to cook. I suggested it as a possible open-

⁵⁴An instrument consisting of two equal-length halves with each half pointed at both ends, and with a sliding lock screw holding the two halves together. It is used to accurately enlarge or reduce an original measurement taken between the points of one end and transferring the distance represented by the points at the other end to an illustrating surface. For example, the dividers are expanded at one end to the actual length of a specimen and the sliding lock screw is adjusted so that the opposite ends indicate half the original measurement. In this way numerous measurements of different parts of a specimen (e.g. length of head, length of tail) can be made and marked on a drawing surface in order to create an illustration in which all parts are equally proportionate (half in this example) to those of the original. CBH's letters to Evermann and others at the USFC frequently requested the use of proportional dividers to aid in his illustrating.

ing, but she refuses to make herself useful otherwise than in her former capacity as cousin to the party.

I hope to see you very soon.

Yours sincerely,

CBH arrived in Tahoe on 14 June, and immediately began work on painting the trout. Apparently, Evermann was not concerned about CBH's letter becoming noticed. We suspect that a similar subterfuge was used to cover the transportation of Juday who, unlike CBH, was professionally competent to "study the statistics and methods of the fisheries of the interior waters of California." Juday did not require any help from CBH, as his letters concerning CBH alluded only to the latter's painting and equipment for the High Sierras trip.

We found it most interesting that the Commissioner's reports from 1904 to 1906 contain comprehensive reports of the fishery studies the Bureau was involved in, but make no mention of Juday, Hudson, or the Bureau's order for an investigation of the fisheries of Lake Tahoe. Juday (1907), then working for the Wisconsin Geological and Natural History Survey, did publish a short report on his Lake Tahoe investigations in the Bureau of Fisheries Bulletin 26, but he included no illustrations and made no mention of CBH. Nevertheless, the three illustrations of the Lake Tahoe cutthroat trout that CBH made are the only ones known that record the life color of that subspecies. Two (Plate 16 A, C) were first published by Ono et al. in 1983, 79 years after their preparation, and we publish the third (Plate 16 B) for the first time, over 100 years after it was prepared.

To finally get CBH to Visalia, Commissioner Bowers wrote CBH at Lake Tahoe on 28 June 1904:

Sir:

Having completed the statistical inquiry upon which you have been engaged at lake Tahoe, under orders dated June 7, you will, on or about July 8, report at Visalia, California to Dr. Barton W. Ever-

mann whom you will assist during the investigation of the trout and trout streams and lakes of middle and southern California.

Your compensation will be at the rate of sixty dollars per month. Your actual and necessary expenses will be refunded to you on presentation of proper vouchers.

The expedition departed 13 July 1904 (Evermann, 1906:3) and reached Volcano Creek, in which the golden trout was originally endemic, no later than 30 July (O. P. Jenkins in Evermann, 1906:40–41) (Fig. 14). The trout, which Evermann would name for Roosevelt, occurred throughout the entire creek from near its mouth at an altitude of about 6,300 ft (1,920 m) to its highest reach, about 10,000 ft (3,048 m). The expedition would go on to explore terrain and streams around and well beyond Volcano Creek (Evermann, 1906: foldout map), reaching or nearly so, the peak of Mt. Whitney, and continuing west about 6 miles (9.6 km) along Lone Pine Creek to a position ca. long. 118°10'W, lat. 36°35'N. We were unable to locate an ending date for the expedition. Jennings (1997:200) mentioned the expedition lasted 2 months, but his source for this is not given. In Evermann's CASA files is a printed invitation of the Massachusetts Fish and Game Protective Association, dated 6 Mar. 1909. It announces a lecture to be given by Evermann, 18 Mar. 1909, in Boston, with the title, "With pack train to the tip-top of the United States in search of the Golden Trout," and includes the following statement in its brief description of the talk, "The party was composed of fifteen men and they were gone a month or six weeks, going in by donkey pack train."

If we accept the month estimate, CBH, would have been away from his new bride for at least 2 months since leaving Detroit for Lake Tahoe. During that time, he would have made three illustrations of the endemic Lake Tahoe cutthroat trout subspecies and two illustrations, one each, of two endemic subspecies of golden trout from the Sierras, both of which Evermann thought represented undescribed species. Evermann's



Figure 14.—Charles Bradford Hudson, 1904, dining out at South Fork Meadow 9 (on south fork of Kaweah River, High Sierras) (CASA Evermann files, Box 76).

Salmo whitei would persist as a valid subspecies, *Oncorhynchus mykiss whitei* (Evermann), but his *Salmo roosevelti* would ultimately be found to be a junior synonym of *O. m. aguabonita* (Jordan). Roosevelt (27 Oct. 1858–06 Jan. 1919), however, would not live to learn of his patronymic loss.

CBH did not restrict his artistic efforts only to fishes during the expedition; he was also sketching the scenery. He made an etching from one of his sketches, prints of which he intended to give to the expedition participants as a souvenir, and Evermann (1905) published it.

CBH returned to Michigan after the High Sierra trip. Evermann must have been as pleased with CBH's trout paintings as he had anticipated. Within a few weeks (29 Sept. 1904) after his return, CBH was telegraphed orders to travel east to Maine to prepare paintings of the local freshwater trout species. He arrived in Mountain View, Maine, on 6 Oct., accompanied by his wife. Between 6 Oct. and mid Dec. 1904, CBH would complete ten color illustrations of salmonids. The work on these would take place in Maine, New Hampshire, and Vermont. We are uncertain that Claire was with him during the entire trip, but

presumably, CBH was with her and back at his mother's home in Detroit in time for Christmas.

Fish Illustrations for Ernest Thompson Seton⁵⁵

In the following discussion, all references to numerous letters (dated between 07/15/1901 and 11/05/1906) from Ernest Thompson Seton (Fig. 15) to Barton Warren Evermann, and relevant other papers (two letters from other sources to Evermann and undated handwritten notes made by Evermann

⁵⁵Ernest Thompson Seton (also Ernest Seton Thompson) was born Ernest Evan Thompson, 14 July 1860, in England. In 1866 he moved to Canada with his family. At least between 15 July 1901 and 10 Feb. 04, he was living in New York City (80 West 40th St), but by 16 May 04 he was living at his estate, Wyndygoul, Cos Cob, Greenwich, Conn. He studied art and illustrated many articles and books, both those he authored and those of other authors. His subjects were varied but included color plates of fish in at least one publication (Commissioner, 1907:15). In 1881 he became Naturalist for the provincial government of Manitoba, Canada. He was an early and important organizer of the Boy Scouts of America. He died 23 Oct. 1946. (Information from various sources, including Beach and Rines (1912), websites of Boy Scouts of America and Wikipedia, and the Seton letters in the Barton W. Evermann letter file, Box 19, Archives of the California Academy of Sciences.



Figure 15.—Ernest Thompson Seton, author, naturalist, early organizer of Boy Scouts of America; contracted with CBH to prepare illustrations of fishes, which he never used. Photograph from Wikipedia, 23 Mar. 2009.

and an unknown employee) are based on the contents of CASA, Barton Warren Evermann, letter box 19. For the sake of brevity, we indicate only a few of the actual letter dates in support of statements we make. No copies of Evermann's letters to Seton were available and may not exist.⁵⁶

Seton (1898⁵⁷) had published a list of the fishes of Manitoba and continued his interest in the subject by planning an update to the list. At least as early as July 1901 and as late as May 1904, Seton was corresponding with Barton Warren Evermann, then with the USFC in Washington, D.C. Seton had been sending Evermann specimens of Manitoba fishes, and occasionally amphibians, for identification and, in some cases, for deposit in the U.S. National Museum.

Seton was planning a book on Manitoba that was to include an appendix listing and illustrating all the species of

fishes found in the province. Although only Seton's letters relating to obtaining the illustrations of fishes are available, it was possible to infer much about the content of Evermann's letters. In addition to available line cuts of species of fishes that occur in Manitoba that appeared in Jordan and Evermann's (1900), Bulletin 47, volume 4 of the United States National Museum, Seton needed 13 more illustrations. Evermann, who was based in Washington, D.C., arranged for CBH, who had returned to California, to prepare the illustrations, which CBH did during 1905. Apparently, there were 12 inkwash (gray-scale) drawings and one in color. Evermann sent the completed illustrations to Seton at Seton's Connecticut home before receiving Hudson's invoice for payment. Seton inscribed his initials, E. T. S., in small letters, on the reverse of each illustration.

It appears that Seton had been led to believe that he was to be charged \$5.00 for each illustration, and his publisher had limited him to spending a total of \$85 (he originally thought he was going to need 17 species illustrated). The total cost for these was later increased to \$90 and then to \$100. CBH, however, sent Evermann a bill for \$325⁵⁸ for the 13 drawings, and Evermann, forwarded the bill to Seton. Seton was clearly surprised by the size of the charge and stated that he was put "in a most distressing predicament." He requested Evermann to intervene on his behalf with CBH, and have CBH reconsider the charges.

Seton suggested three solutions to the problem: "First, CBH would 'keep all the drawings' and use them as he wanted, and Seton would pay CBH a 'bonus' of \$40. Second, Seton and his intended publisher would share in the cost of the drawings, but would pay only \$10 each for the drawings [i.e. a total of \$130, which is what CBH would

have charged the USFC for similar illustrations]. Third, the Fish Commission would take ownership of the drawings and Seton would pay the Commission \$65 and promise not to use the drawings for a year, in order that the Commission would have the first opportunity to publish them.

It is uncertain what CBH's decision was, but because the illustrations were among the large group that the Department of the Interior, Fish and Wildlife Service (under which the Bureau of Fisheries was placed in the early 1940's) transferred to USNM in 1962⁵⁹, it appears that some aspect of the second option, proffered in Oct. 1905, was agreed on. Between October and 5 Nov. 1906, there is no correspondence in the file. On 5 Nov. 1906, before which date Seton had returned the illustrations to Evermann to be processed for publication, Seton asked to countermand his order that half-tone plates be made from them because he found he could only use line cuts (black and white drawings as opposed to gray-scale or colored ones) for his purposes. Not only did Seton not use the illustrations, he never published another paper on fishes—from Manitoba or elsewhere.

In 1909, at the annual meeting in Winnipeg of the British Association for the Advancement of Science, the Association issued "A Handbook to Winnipeg and the Province of Manitoba." In it, Seton authored a paper on the mammals and birds, of which groups he was an authority; the article on the fishes and fisheries was authored by E[dward]. E[rnest]. Prince (1858–1936; British-Canadian scientist). Neither article contained illustrations.

Return to General Illustrating and Authorship

By the end of 1905 CBH was either close to finishing, or had finished, writing his first novel and submitted it for publication. Also about this time he completed three book illustrations that appeared as half-tone plates in Hornaday

⁵⁶Jennings (1997: end note 78 includes the following statement, "Many of the [U.S.] Bureau [of Fisheries] records now in the Evermann files (Archives, California Academy of Sciences) contain official Bureau information . . . that can be found nowhere else . . . Renée M. Jaussaud (formerly with the National Archives) once informed me that Congress authorized a number of the old Bureau files in Washington, D.C. to be destroyed . . ."

⁵⁷Authored as Thompson, E[rnest] S[eton], 1898:214, reference not seen, cited in Evermann and Goldsborough (1907:118) and alluded to by Seton in a 16 May 1904 letter to Evermann.

⁵⁸Each of the figures is about 8 inches long and 2.5 inches deep, or about 20 square inches in area. CBH was receiving \$0.50 a square inch for his fish illustrations from the U.S. Fish Commission. Thus, CBH would have charged the Commission about \$10 per illustration, or \$130 for all thirteen, indicating that CBH billed Seton for 2.5 times the amount he would have charged the Commission for similar illustrations.

⁵⁹Letter from C. F. Pautzke, Commissioner, Fish and Wildlife Service, Department of the Interior, to L. P. Schultz, Curator of Fishes, USNM, 23 Jan. 1962 (Registrar's Accession No. 239954).

(1906). They are the last illustrations he did for Hornaday. At least one of the plates was rendered in color as an oil painting, but it was redrawn in gray scale for the published version.

During 1906, CBH was illustrating fishes again for the USBF (successor of the USFC). He produced one inkwash painting of a new species of a freshwater fish from Argentina for a paper by Evermann and Kendall (1906) and spent the summer and fall in Michigan preparing seven colored illustrations of Great Lakes whitefishes for the USBF, but his presence in Michigan began in the spring⁶⁰, probably a response to concern for his mother's health. The illustrations were first published by Koelz (1929)⁶¹ 23 years later. Given the delay in publication, we presume that the order for the fish paintings was partly Evermann's desire to support CBH while in Michigan, and probably for a study Evermann intended to undertake, given his interest in salmonids (at that time whitefishes were considered to belong in the family Coregonidae, separate from, but related to the Salmonidae).

On 8 Dec. 1906, Grace Hudson gave birth in California to their first child, Bradford Benedict Hudson, who would later become a professor at Rice University, specializing in the culture of the Near and Middle East. We assume that CBH had returned to California from Michigan in time to be present for his son's birth.

The year 1907 was a busy one for CBH. He again spent time with his mother in Detroit. He would have received proofs on his first novel, "The Crimson Conquest," a romance based

⁶⁰In CASA Evermann, letter Box 18, is a copy of a CBH letter, dated 30 Apr. 1906, from his mother's home in Detroit, to Evermann, hoping Evermann will visit on his way to Grand Rapids.

⁶¹Walter [Norman] Koelz, 11 [Sept. or Nov. depending on source] 1895–24 Sept. 1989, did not use his middle name or initial as an author. He received a Ph.D. from the University of Michigan in 1920. Under his name on the title page of this study, he indicated, "Formerly Associate Aquatic Biologist, U.S. Bureau of Fisheries." After this study, he only published one other paper on fishes, in 1931. He published extensively on Asian birds for awhile, and became interested in Asian textiles and plants. He led a very interesting life.

on Pizarro's conquest of Peru which would be published in October, and he published a nonillustrated article in the *Popular Science Monthly* on the background of emerging militarism in China. Evermann requested more illustrations of salmonids, but we only have evidence that CBH illustrated two (Plates 15 E and 16 F).

By the end of 1907 or the beginning of 1908, CBH's mother died, and CBH returned to Detroit to settle her estate (CHBMS, entry: ~8 Jan.–8 Mar.).

The End of Fishes

There is no firm evidence that CBH illustrated fishes in 1908 or 1909. Although doubtful, it is possible, however, that three species of Oregon freshwater fishes that Evermann collected in 1904 and CBH illustrated in gray tones (Plate 2 B, C, D), and which appeared in Snyder (1908; issued 28 Sept.), were prepared in 1908.

In the summer of 1908, CBH began painting pictures of fruits and flowers for the seed catalogs of Luther Burbank⁶², an internationally famous and immensely successful horticulturist, whose farms were in Santa Rosa, Calif. CBH sketched at the farms in 1908, and in the summer of 1909, and appears to have finished some of the paintings at home. By 20 Nov. 1909, CBH completed 20 illustrations for Burbank, for which he received a total of \$1,015.00 in at least two payments.⁶³

Among the illustrations for Burbank are a series of seven colorful paintings of some of Burbank's fruit and berry cultivars. In 1982, the Luther Burbank Home and Gardens in Santa Rosa, issued "Artistry With Plants" (Anonymous, 1982), a group of high-quality reproductions (each 8 × 10" [20.3 × 25.4 mm]) of these paintings printed on firm paper and suitable for framing, together with a card, describing each cultivar

⁶²Mar. 1849–11 Apr. 1926. Burbank was survived by his wife, who willed his historic home in Santa Rosa, Calif., to the city. It is now a nonprofit organization listed as the Luther Burbank Home & Gardens.

⁶³Library of Congress, Manuscript Division, Papers of Luther Burbank (General Correspondence), Box 6, Folder H, miscellaneous, 1907–16.

and brief biographies of Burbank and CBH. These seven prints appear to be the only CBH paintings that have been reproduced individually and intended for sale and display.⁶⁴ As of March 2009, the individual prints were still available. See also Anonymous (1982) in section "CBH's Non-Ichthyological Illustrations in Publications by Other Authors."

Claire Hudson (later, CHB), CBH's daughter of his second marriage, was born in early 1910⁶⁵, about the time of the building of the Hudson's permanent home at 317 Alder St, Pacific Grove, Calif. The 1910 Census report, entered 12 May, indicates that CBH, his wife Claire, Lester (age 15, son of CBH's first marriage), and both children of his present marriage were residents at the Alder St home.

In early 1910⁶⁶, CBH illustrated three species of California salmonid fishes in color for the California Fish and Game Commission at the request of Charles A. Vogelsang, Chief Deputy of the commission. These illustrations are signed, dated, and presently framed and hanging in the commission offices in Sacramento. A fourth painting, of a Chinook salmon, clearly done by CBH, but unsigned and undated, is also present and framed in the commission offices. We suspect it was painted about the same time as the other three, as all the correspondence listed between Vogelsang and CBH in SQBMS is dated 1910.

⁶⁴We exclude CBH's 1901 paintings of Hawaiian fishes and his 1904 paintings of salmonid fishes, which were issued as postcards, variously, by the Bishop Museum (beginning in the early 1900's) and the Steinhart Aquarium beginning about 1923, as well as the poster for the 1985 Smithsonian "Drawn from the Sea" exhibition, which included 11 illustrations of fishes, two by CBH, and the *Cosmopolitan* magazine advertisement poster of Sept. 1895, reprinted in recent years and currently available for purchase by the New York City Public Library.

⁶⁵The Social Security Death Index (SSDI) has her birth date as 30 Dec. 1912, but the 1910 Census, indicates she was 3 months old at the time of enumeration, 12 May 1910, therefore born in Feb. 1910). According to the SSDI, she died on 26 Mar. 2007, based on information from her death certificate.

⁶⁶CHBMS entry, "1/14/1910: Chas. A. Vogelsang letter to CBH enclosing a check for three colored drawings of Rainbow, Steelhead and Eastern Brook Trout..."

During 1911, CBH painted one illustration of a fish (Plate 15 B), a rainbow trout from a hatchery on the McCloud River. It was done for the USBF, but, until our present study, was only published on a postcard issued by the Steinhart Aquarium, San Francisco, possibly at its opening in 1923.

Similarly, during 1912, CBH painted his last illustration of a fish, again for the USFC, again it was a rainbow trout (Plate 15 C), and again it was only first published (Bond, 1985) well after its preparation, and then only as part of an announcement of, and poster for, the Smithsonian exhibition “Drawn from the Sea, Art in the Service of Ichthyology” (curated by VGS).

CHBMS for May, 1912, wrote, “Grace in Palo Alto hospital-hopes CBH will ‘never paint another fish,’” and for ~23 May: “CBH complains of eye strain. CBH finishes Steelhead” [trout; actually, the rainbow form, Plate 15 C].

In 1913, probably right after completing the “steelhead,” and similar to it, CBH painted a rainbow trout in oil, which painting we saw hanging on the wall of Claire Hudson Brett’s home in 1987.

California Academy of Sciences Days⁶⁷

Associated with the cessation of his illustrating fishes, CBH was turning more toward his interests in fine art and writing. In 1914, he attended William Merritt Chase’s⁶⁸ Summer School of Art in Carmel-by-the-Sea, very close

⁶⁷Unless noted otherwise, information in this section is largely taken from CASA B. W. Evermann, correspondence Box 1918, A–H.

⁶⁸A compiled biography of Chase (1 Nov. 1849–25 Oct. 1916) is available at <http://www.answers.com/topic/chase-william-merritt>. CBH is variously reported to have studied with Chase at the Art Student’s League in New York, but there is no record of this in the ASL’s archives (S. Cassidy, ASL archivist, email to VGS, 2 Feb. 2009). SQBMS for summer 1914, lists an unspecified CBH-Chase Summer School relationship, and CHB (10 Feb. 1985, letter to VGS), in response to VGS’s request for date of CBH’s study with Chase, wrote “Studies with Chase, I believe, were while he was at home in Pacific Grove concurrently sketching the Monterey coast, etching it and writing his book [“The Royal Outlaw”]—mainly during the years 1912–1916, before 1917-Academy of Sciences years which led to serious landscape painting.”

to CBH’s home. Chase was one of America’s foremost impressionist artists. CBH was also about to finish writing his second novel, which would be published in 1917.

In 1914, Barton Warren Evermann resigned his position with the USBF in Washington, D.C., and on 16 Mar. 1914 became director of the California Academy of Sciences⁶⁹ in San Francisco. The Academy was then in the process of finishing construction of a new building and planning for exhibits. Its first building had been destroyed in the 1906 San Francisco earthquake. The move brought Evermann within easy commuting distance of his most important colleague, David Starr Jordan, and the active group of Stanford University ichthyologists at Palo Alto, and, no less importantly, Evermann’s favorite illustrator of fishes, Charles Bradford Hudson, at Pacific Grove. Although proximity to CBH would benefit Evermann, proximity to Evermann would benefit CBH even more.

On learning of Evermann’s move to San Francisco, CBH wrote him from Pacific Grove on 30 Sept. 1914:

“I have recently finished another novel. It has taken me considerably longer than a year to write and reduced my capital materially. I’m looking for a job. Can I do anything for you, for the Academy, or for anyone you know about?”

Well, not quite “anything.” In a letter with the same date as CBH’s (the short distance between Pacific Grove and San Francisco, may have made this possible), Evermann responded that he had submitted a proposal to the Carnegie Foundation to do a study of the salmonid fishes of the world, which he had mentioned to CBH in the past, and wanted CBH to be the illustrator—it would provide CBH work for years to come. CBH responded on 18 Oct 1914:

“I am glad you still have the Salmonidae project in mind. It will be a great work, and under

⁶⁹Jennings (1997:302).

the auspices of the Geographical Society [sic] will get a desirable sort of publicity. I surmised they might be interested in the matter and sincerely hope they will put it through.⁷⁰ But really, I am very doubtful about painting any more fish. The last work I did put me into eye-glasses, and I’ve wondered that the business did not put me into an insane asylum, though it was always interesting, and such a great work as you propose would be a[n] inspiration.”

Possibly, even before arriving at CAS, Evermann and John Rowley⁷¹, an exhibits specialist at CAS since 1907, were preparing plans for a new way, the diorama, to exhibit mounted wildlife. A diorama shows groups of animals naturally posed in their native habitat. The models are placed in the foreground, which, depending on the species, includes sand, rocks, logs, or lifelike reproductions of the vegetation. To give a sense of depth to the diorama, the background is painted to blend in with the foreground, and variously shows, for example, the ocean, shore, trees, distant mountains, or a desert scene. The size of the CAS dioramas was variable, but the largest painted backgrounds were 18 × 25 ft (5.5 × 7.0 m)⁷², mural size.

⁷⁰It never was.

⁷¹John Rowley (1866–1928), a taxidermist and early exhibits specialist, began work in 1889 at the American Museum of Natural History. In 1903, he moved to California and assisted David Starr Jordan in building the university’s biological museum. In 1907 he joined the staff of the California Academy of Sciences as chief of exhibits. In 1917 he was appointed director of the Oakland Museum, and in 1920 he became chief of exhibits at the Los Angeles County Museum. He participated in and supervised many of the early dioramas at the California Academy of Sciences, including those for which CBH painted the backgrounds (distilled from Wonders, 1993: 140–141).

⁷²Information about the dioramas, including invoices for payments to CBH for his background paintings are found in manuscripts in CASA files: North American Hall, Boxes 1 and 2, and Simson African Hall, Boxes 1 and 2. Also included for each hall, is a CAS published pamphlet illustrating in gray scale a photograph of each included diorama in that hall, identifications of the species and sundry comments on behavior, distribution, and conservation, of the elements in

continued on next page

The next letter between Evermann and CBH, came from Evermann some months later. On 28 Apr. 1915 (a Wednesday), he wrote that he was going to visit Pacific Grove “next Saturday” and “I want to talk Salmonidae with you, also background painting for the Academy.”

If salmonids were broached during Evermann’s visit, CBH was not interested, but the possibility of painting the diorama backgrounds did interest him. After all, CBH had been sketching, drawing, etching, and painting outdoor scenes for himself and for others for many years.

Having finished his second novel, and lacking any contracts for illustration, CBH had time in 1915 to pursue his interest in art and writing. In August, CBH (1915) published a magazine article, “Monterey on the Etching Plate,” about the historic Monterey area and its physical and cultural deterioration. It included reproductions of several of his etchings, also done in 1915, and it would be the last article, either his own or for another author, for which he specifically prepared illustrations. In an appreciative, if effusive, review of CBH’s article (see a more complete discussion in the CBH Authored Publications section), the writer mentioned that CBH’s canvases, which were mostly of scenes along the Monterey coast, had “received attention and recognition” for their “artistic handling” and “splendid technique.”

On 27 July 1915, Grace Hudson wrote Evermann that CBH was away

⁷²(continued) the diorama, acknowledgement of the supervisor, artist, and exhibits responsible for the preparation. The North American Hall (Anonymous, 1939a) was dedicated on 22 Sept. 1916, with only a few dioramas completed, the others to be opened soon. The Simson African Hall pamphlet (Anonymous, 1937b) is similar to the other pamphlet, but it includes a more extensive introductory history of CAS, staffing list, information about the donor, Leslie Simson, a 2-page article by him, “Collecting Animals in Africa,” an illustrated 2-page article on taxidermy and modeling plants. The halls were redesigned and refurbished during 1986–88, and the North American Hall was recast and renamed as the Wild California Hall. In the process, several of the dioramas with CBH backgrounds were destroyed. Finally, beginning in 2004, CAS closed its facilities to the public, destroyed the building, and erected a new one, completing it in 2008. None of the original dioramas were saved.

sketching and “studying marines ‘down the coast.’” Because CBH had promised Evermann to be in San Francisco in the fall, she wanted to know if the new CAS building would be finished by September. If so, she could make plans about renting the Hudson’s Pacific Grove home and moving closer to the Academy so CBH might begin work. Evermann responded a few days later that the staff would be finished moving into the new building by 1 Sept., but that there would be no need for artists before the middle or last of September.

Things moved slowly. Evermann was not ready for CBH to begin work at CAS in September, but Rowley had assigned CBH a subject, leopard seals, for his first background painting. Eager to get moving, CBH wrote Evermann on 10 Sept. that he would soon send him “a small preliminary study of the subject selected by Mr. Rowley for the background assigned to me. If the study meets your approval I will [prepare] a larger one at once. Can you tell me about when I may begin work ... I am figuring, in a general way, on the middle of October.” Evermann responded on 13 Sept. that it would be the middle of October or “at worst, a little later” before the museum would be ready to begin on the backgrounds, and that it was not decided whether the leopard seals would be among the first. Evermann was ever optimistic.

Throughout the correspondence among Rowley, Evermann, and CBH, and including payment invoices and the labeling of the seal diorama, the participants were actually referring to the harbor seal, *Phoca vitulina* Linnaeus, of the northern hemisphere, not the leopard seal, *Hydruga leptonyx* (Blainville), which is native to the Antarctic and sub Antarctic. At one point the finished diorama was labeled “Leopard Seal; Harbor Seal” (Anonymous, 1939a), and indicated as *Phoca richardii* (Gray), currently considered to be a valid subspecies of *P. vitulina*.

CBH sent the small preliminary study to Evermann for approval on 6 Oct. 1915. On 13 Oct., Evermann replied,

“... the leopard seal background ... is now on exhibition in my office, where it is much admired by all who have seen it. I take special delight in calling it to the attention of visitors.” Rowley, who must have been away, had not seen it, but CBH, wrote Evermann on 16 Oct. that he had heard from Rowley, who was gratified by the preliminary study and suggested some “features, which can be readily introduced.” Furthermore:

“[Rowley] tells me the size of the painting is to be 18' x 48' instead of 18' x 25'—about double the area. I assume that the price will be increased in proportion. I should be glad to know before making the additional studies.” [CBH’s underlining]

To which Evermann responded somewhat tersely on 31 Oct. 1915:

Dear Captain Hudson:

The size of the backgrounds given by Mr. Rowley, 18 x 48 feet, is only approximate. The total length of the case is 25 feet. The fact that the background is curved will increase that but slightly. Our contract with Mr. Corwin [another artist CAS employed] is for \$500.00 for backgrounds, regardless of size. We can’t possibly increase the price. Our funds for this year are very limited at this time.

I hope you may come up soon and visit the Museum and see just what the cases are to be like.

With kindest regards,

Sincerely,
[Barton Warren Evermann]
Director

To which CBH blinked, and replied the next day:

Dear Doctor Evermann:

I can be ready to begin on the leopard seal background about the middle of the month. Would prefer not to leave Pacific Grove



Figure 16.—California Academy of Sciences harbor seal diorama (now destroyed); background painted by Charles Bradford Hudson in 1916. Photograph courtesy of the late Claire Hudson Brett.

until the canvas⁷³ is entirely ready for me to commence, and shall be glad if [you] post me about a week in advance. Should be glad, too, if you will return the study, that I may have it on hand while making the supplementary ones.

I wish I could follow your suggestion to go up and look over the scene of trouble, but my hands will be full until the last day.

This spurt of correspondence did not get things moving, however, and two and a half months later, 19 Jan. 1916, a concerned CBH wrote Evermann:

“I presume from the fact that I have not heard from you that you had unexpected troubles and delays in the completion of the [CAS] building. I am not especially in a hurry to begin, but am anxious to know whether it is likely that I can finish the work before April 1. What is the average length of time required on the backgrounds - about? And is there any possibility that I may have two to make? ... I wish you could arrange it that

⁷³Rather than painting the backgrounds directly on the wall, they were painted on canvases, which were affixed to the walls.

I may have two of the orders, for, as I said to you before, the single painting will hardly make it worth my while to go to the expense and inconvenience of [me and my family moving to be near CAS] ... ‘The [Royal] Outlaw’ [CBH’s second novel] has been taken by E. P. Dutton & Co.- one reason why I’m anxious about the dates, etc., for I am rushing another to get it in shape for their consideration at the earliest convenience.”⁷⁴

Evermann responded a week later that Rowley could be ready for CBH “any time after a week or two that may be convenient to you ... Besides the leopard seal group perhaps you would be willing to undertake the desert bird group.” CBH would and did, but the delays did not end in 2 weeks.

Finally, on 6 Mar. 1916, Evermann wrote, “Mr Rowley ... is now ready for you to begin on the leopard seal group, so you can come on any time convenient ...” To which, CBH’s response on Mar. 9, begins “Hooray!”

Thus, began a lengthy, if periodically interrupted, association of CBH as a diorama background painter for CAS. He

⁷⁴We think this suggestion of another, impending, novel was disingenuous.

is variously reported to have completed 12 background paintings (e.g. Wonders, 1993:232), but we have only been able to establish that he painted 11.⁷⁵ Among the first seven, all were scenes for California or other western American biota, of which three (leopard seal, fur seal, white pelican) include the Pacific Ocean in the background painting. Our source for the dates and payments for numbers 1, 2, and 7, below, is “CASA North American Hall, contracts, payments etc.” (Fig. 16). (Among the following, we have entered a few of CBH’s other activities among the chronologically arranged listings of the background paintings to indicate that he was involved in more than just painting backgrounds during the period he worked at CAS.)

1) For the leopard seal background, CBH was paid \$500, in two \$250 installments, 4 Apr. 1916 and 31 July 1916.

⁷⁵CHB (in litt, 18 Nov. 1985) sent VGS photographs of the dioramas for which she thought CBH had painted the backgrounds. She included one of the Steller sea lion, which all three printings (1939, 1945, 1947) of the CAS pamphlet, “North American Hall” shows and credits to Charles Abel Corwin (1857–1938), as do payment vouchers (Karen Elsbern, CASA, emails 23 and 25 Feb. 2009); we earlier checked the North American Hall Box 1914 and found a notation that two payment vouchers for the “Elephant Seal” Group, were made to Corwin, one for 11 May 1923 for \$400 and one for 31 May 1923 for \$600.

2) CBH received two \$250 payments for the desert bird background, 30 June 1916 and 31 Aug. 1916. To prepare for this background painting, CBH made a trip to the California desert near the Salton Sea, where he made sketches that he used not only for the diorama, but later, probably, for some of his fine-art paintings of the California desert. On 7 June 1916 he sent a letter about his experiences in the desert to G. O. Shields, friend, publisher, author, and staunch conservationist, who forwarded the letter to the *New York Times*. The *Times* published it in its entirety on 18 June 1916 (which we repeat; see section “Publications by CBH”).

3–5) CBH was finishing the background for the white pelican group in May 1918, and would soon start on a background for the fur seal group and one for the Roosevelt elk group (5).⁷⁶ The fur seal diorama was completed sometime after 19 Feb. 1919 and before 4 Aug. 1920 (based on Evermann, 1920:368, and publication date of the Proceedings of the CAS). The entire elk diorama was completed on 20 Dec. 1919 (Evermann, 1920: 369), which means the background would have been completed before the mounted specimens were in place.

On 6 Apr. 1917, the United States entered World War I. On 17 Mar. 1918, CBH (1918) published a letter to the editor of the *New York Times*, under the title “Persistence of Teuton’s Traits from Caesar’s Time.” In it he developed his belief that Germanic bellicosity was a culturally fixed character trait. It would be the last publication he authored.

6) CBH completed the background for the waterfowl group after numbers 3–5, but before Apr. 1921 (based on a halftone photograph of the group in Evermann (1921:212).

7) CBH finished the background for the grizzly bear group on about 20 Feb. 1926, for which he was paid \$1,200.

The last four backgrounds CBH painted were of African mammal groups

(information from CASA Simson African Hall, agreement between CAS and Simson, box 2).

8) Oryx group background, 31 May 1932, \$500.

9) Zebra group background, two payments, both dated 30 July 1932, progress, \$300; final, \$200.

10) Dik-dik group background, two payments, both dated 31 Oct. 1932, on account, \$100; final, \$100.

11) Bushbuck group, background, two payments, both indicated progress and dated 30 Nov. 1932, \$150, 250.

There is a payment dated 28 Feb. 1933 “Final payment painting four groups in African Mammal Hall, \$50.” This was, perhaps, a bonus for having completed the paintings so promptly.

Finishing the last two of the African Hall backgrounds must have evoked mixed feelings of relief and sadness in CBH. They would be his last work for CAS, and Evermann would die before CBH finished them. CBH had just started working on the second of the four African backgrounds when Evermann, who had not been well for some time, entered Stanford University Hospital on 23 June 1932 (Jennings, 1997:305). Evermann died on 27 Sept. 1932, having never left the hospital. CBH and Evermann had worked and traveled together since 1901, and since 1916, there had been many social interactions between them and their families.

Few things last forever, and CBH’s diorama backgrounds were not exceptions. Some of the dioramas, including the backgrounds, were eliminated in 1988, when the North American Hall was recast as the Wild California Hall. For the 9 Oct. 1988 opening of the Wild California Hall, a small spiral-bound booklet, “Wild California” (Anonymous, 1988), was issued containing comments and half-tone illustrations of the incorporated dioramas, of which two of the backgrounds were by CBH, Desert Floor (formerly, Desert Bird Group), and Montane Slope (formerly, Grizzly Bear Group) (Fig. 17).

The remarks in the booklet concerning the Montane Slope diorama stated, “Though in a Rocky Mountain setting,

the plants, birds and small mammals here are the same species or closely related to those found in the subalpine zone of California’s Sierra Nevada. One reason the Academy chose to retain this diorama in California is that the stunning background mural is one of the finest works by the well-known artist Charles Bradford Hudson. Its removal would mean its loss.” The entire building was closed in 2004 and destroyed, and a new building opened in 2008. None of the backgrounds were saved from the old building (T. Iwamoto, CAS, emails to VGS 03, 23 July 2008).

There remains a grace note for CBH’s diorama backgrounds. He prepared small studies to work from in painting some or all the backgrounds. We are unaware of the disposition of those studies, except for the one he made for the grizzly bear background. CBH had traveled to Jackson Lake, Wyoming, in the summer of 1925 to paint the Grand Teton scene used in the background. The study, oil on canvas, 18×24 in. (46×61 cm), was neither signed nor dated. CBH gave it to Evermann⁷⁷ and it hung in his office and that of subsequent directors for many years. Evermann’s son and daughter donated it to CAS, along with many of Evermann’s personal items that were in his office when he died.⁷⁸ The painting is no longer on view, but stored in the CASA holdings. We think it should be in a museum on display. In the meantime, we photographed it and reproduce it in color (Fig. 18).⁷⁹ This figure shows another, but less common theme than the Pacific Ocean, in CBH’s paintings: mountains (Fig. 18).

⁷⁷As acknowledged by Evermann in letter to CBH dated 17 Apr. 1929 (CASA, Evermann letter files, 1914).

⁷⁸Letter from Toxaway Bronte Evermann and Edith Evermann Humphrey to Trustees and Council CAS, Oct. 1932 (CASA correspondence, Box 1932 D–G).

⁷⁹Photographs of all seven of the North American Hall dioramas and three of the four Simson African Hall dioramas for which CBH painted the backgrounds were given to VGS in late Nov. 1985, by CHB, who had had them photographed. About 1935, CAS prepared postcards showing the dioramas. The photograph of the grizzly bear diorama used on the postcard was taken by the famous photographer Ansel Adams.

⁷⁶Letter from Evermann to E. L. Goldsborough, 9 May 1918 (CASA Evermann Correspondence Box 1918, A–H).



Figure 17.—California Academy of Sciences grizzly bear diorama (now destroyed); background (about 18×25 ft; 5.5×7.6 m) painted by Charles Bradford Hudson in 1926; compare with Figure 18 below. Photograph courtesy of the late Claire Hudson Brett.



Figure 18.—Wyoming Grand Teton scene (24×18 in; 61×46 cm), oil on canvas, not signed, painted by Charles Braford Hudson, summer, 1925, as study for background painting used in California Academy of Sciences grizzly bear diorama (see Figure 17 above). Painting in files of CASA.

“Scapeing” Sea and Land

Early in CBH’s association with CAS, Evermann introduced him to Abraham L. Gump, whose family owned the well-known Gump’s department store in San Francisco. Among fine articles of furniture and oriental art, the store also specialized in exhibiting and selling the artwork of California artists. Gump’s would become the sole purveyor of CBH’s landscapes and seascapes. In Wilson’s (1949:147–148) book about Gump’s, she mentioned how A. L. Gump became impressed with CBH and his paintings, noting that “Gump had felt a strong personal liking for Hudson from the beginning of their acquaintance. He particularly admired [Hudson’s] scientific approach . . . When Hudson undertook a long camping trip on a barren island in the middle of Pyramid Lake, Nevada [in 1917] to study the native habitat of white pelicans [for a CAS diorama background painting], Gump was fascinated. As he sold Hudson paintings, A. L. interjected his own enthusiasm for the personality of the man who could reproduce so faithfully the peculiar atmosphere of a desert sunrise or the exquisite blend of pink lavender in the dusk of sunset.”

Wilson describes how in 1926, Crown Prince (later King) Gustaf Adolf of Sweden, on a visit to Gump’s, admired a Hudson painting, “October, Point Lobos.” Shortly after the Crown Prince departed, members of the Swedish–American Society of San Francisco purchased the painting and sent it as a gift to him. The painting (Fig. 19) still hangs in an office of the Royal Palace.⁸⁰ It is one of but a few CBH paintings or etchings we found that are still present in the collections specifically noted in his previous biographical statements. Others are at: Boston Museum of Fine Arts, the Crocker Museum (Sacramento, Calif.), Luther Burbank Museum (Santa Rosa, Calif.), and probably the Oakland Museum, Calif.

⁸⁰Kerstin Hagsgård, associate curator, The Royal Collections, Stockholm, Sweden, email, 20 June 2007. Hagsgård photographed the painting and granted us permission to reproduce it. We note that the painting is in need of cleaning.



Figure 19.—“October, Point Lobos,” by Charles Bradford Hudson, oil on canvas, signed lower right, no date, dimensions not provided. Royal Collections, Sweden. Purchased 1926 from Gump’s department store, San Francisco. (Photograph ©Kerstin Hagsgård, 2008).

Among the CBH paintings noted in his biographies that we have not been able to locate are: the painting of the 11th Cavalry that hung in the officers club of the Presidio of Monterey, Calif. (Presidio and military archivists believe it may have been taken by an officer when the Cavalry vacated the Presidio during or just before World War II); small painting of sea lions in the E. H. Harriman collection, which vanished after 1993; the disposition of paintings (one or more not indicated) stated to be in the collection of California Senator James D(uval). Phelan (also a former mayor of San Francisco)⁸¹; a painting indicated as being in the Dominion Gallery, New Zealand (now the Museum of New Zealand, or Te Papa Tongarewa, which informed us they have no record of ever having owned a CBH painting).

⁸¹According to email (4 Mar. 2009) from Babette McKay, Phelan left only his villa and grounds in Saratoga, Calif. (now the Montalvo Arts Center), to the trusteeship of the San Francisco Art Association. “Most of his personal possessions were left to his nieces and nephews.”

Final Years

After finishing his work on the CAS dioramas in late 1932, and continuing until his death on 27 June 1939, CBH would restrict his artistic efforts to seascapes and landscapes. His daughter, CHB, wrote VGS (in litt., 31 May 1985) that CBH;

“... painted right up to 5 days before he died. (His heart was damaged by peritonitis 12 years earlier ...). The 3 little paintings he left on his easel were small masterpieces ... He was affected by the “Modern” art he saw around him in Paris and was amazed at its spread by the “lunatic fringe,” but he admired what was being done by the “masters”—some of them, although he didn’t know any of them ... He wrote a book (never published) entitled, “Fine art and the average man.” I have only been able to find a few chapters. I think he vented his feelings and attitudes in that manuscript; a side occupation while he was painting.”

Honors, Awards, Laudatory Assessments

Medals

Upon his graduation from Columbian Preparatory School⁸² in Washington, D.C., in 1883, CBH, age 18, was awarded the Janus gold medal in French.⁸³ At his graduation from Columbian College (now George Washington University) 4 years later, CBH received a B.A. degree, and, additionally, a certificate of proficiency in collegiate mathematics and a diploma in Greek and Latin.⁸⁴ CBH was offered a chair in the Classics Department at Columbian College, which he did not accept.⁸⁵

We have already mentioned the silver and bronze medals awarded CBH for his illustrations at the International Fisheries Exposition in Bergen, Norway (16 May–30 Sept. 1898). Hornaday (1899b) included an illustration of the silver medal. CBH was also awarded a bronze medal for drawings exhibited at the 1900 Exposition Universelle in Paris [world's fair].

There is confusion in the literature as to the nature of the medal that CBH was awarded for his drawings and paintings shown at the Paris Exposition. The confusion possibly originated from a *New York Times* article, 2 Sept. 1900, page 21, in which it is indicated that CBH (listed as a Collaborator [of the U.S. Fish Commission], New York) received a silver medal. The story is indicated as coming from the Paris Exposition Edition of *The New York Times*, 18 Aug. 1900. The confusion was compounded

by an article by C. Ravenel (1902:18) who wrote that, "Silver medals were awarded to Mr. A. H. Baldwin and Mr. C. B. Hudson for 'water-color drawings of fishes made to illustrate publications of the Commission.'" A letter⁸⁶ from the Ex. Assistant Commissioner General of the United States Commission to the Paris Exposition of 1900 to CBH, states, "I have the honor to send you herewith a medal in bronze, commemorative of the award made to you on your exhibit in Class 53 at the Paris Exposition of 1900."

New species

Biologists who describe new species consider that they have honored someone by naming a new species for them. There are four new species of fishes and one new species of opisthobranch mollusk that have been named for CBH. His friend, Barton Warren Evermann, participated in three of the four descriptions of new species of fishes, indicating overall his high regard for CBH's work.⁸⁷

1) *Dendrochirus hudsoni* Jordan & Evermann (Family Scorpaenidae). Jordan and Evermann (1903:203) wrote, "Named for Capt. C. B. Hudson, in recognition of the excellence of his paintings of Hawaiian fishes." No illustrations accompanied the publication; however, CBH's illustration of the species appeared as Plate 73 in Jordan and Evermann (1905), and we reproduce it in our Plate 25 F. Jordan and Evermann's species is no longer valid, and is now considered a junior synonym of *Dendrochirus barberi* (Steindachner).

2) *Emblemaria hudsoni* Evermann and Radcliffe (Family Chaenopsidae). Evermann and Radcliffe (1917:147) wrote, "We take pleasure in naming this new species for our friend, Capt. Charles Bradford Hudson, artist and author, who has succeeded better than any other in

depicting on canvas the life colors of American fishes." None of the illustrations of fishes in this study, including that of *Emblemaria hudsoni*, were drawn by CBH. Species is valid.

3) *Lutianus hudsoni* Evermann and Shaw, 1927 (Family Lutjanidae). Evermann and Shaw (1927:116) wrote, "This species is named for Captain Charles Bradford Hudson, most able American artist in depicting the life colors of fishes." The species was not illustrated. The name is no longer valid and is considered a junior synonym of *Acanthopagrus schlegelii* (Bleeker).

4) *Callionymus hudsoni* Fowler (Family Callionymidae). Fowler (1941:10) wrote, "Named for Capt. Charles B. Hudson, whose valuable figures of Japanese dragonets were published in 1903." All the species described in this study were illustrated by Fowler. The name is no longer valid and is considered to be a junior synonym of *Callionymus enneactis* Bleeker.

5) *Acanthodoris hudsoni* MacFarland (Family Onchidorididae). MacFarland (1905: 51–52) wrote, "Species [of mollusk] named in recognition of the able work of my friend Capt. Chas. B. Hudson, Artist of the U.S. Bureau of Fisheries." The species was not illustrated. Frank Mace MacFarland (1869–1951) was a member of the Stanford University faculty for many years. He probably became acquainted with CBH through David Starr Jordan and or Barton Warren Evermann. The species name is still considered to be valid.

Appraisals of CBH as an Illustrator

Hornaday (1891:viii) wrote, "I am also under obligations to Mr. Charles Bradford Hudson, the accomplished artist, whose skill has done so much to explain and embellish the text. The spirit and interest with which he entered into his share of the work very materially lightened and encouraged my own tardy labors."⁸⁸

Hornaday (1899b:449, 451) wrote, "The most remarkable thing about him [CBH] is his versatility, and in that re-

⁸⁸This quotation and the CBH illustration used as a preface to Hornaday's book, were reproduced in "The Literary News," July 1891, 12(7):195.

⁸²A former department, which no longer exists, of Columbian College (now George Washington University).

⁸³*Washington Post*, 16 June 1883, p. 1.

⁸⁴*Washington Post*, 9 June 1887, p. 2, and *Washington Evening Star*, for same date, unnumbered supplement p. 4; also, additional information from CBH's great granddaughter from his second marriage, Sarah Quayle Brett, attachment to email to VGS 17 Oct. 1998.

⁸⁵Christine Hudson Kempton (interviewed by VGS 3 May 1985), CBH's daughter by his first marriage, mentioned the offer of a chair. Claire Hudson Brett (in litt., to VGS, 22 May 1985), daughter by second marriage, wrote that it was in the Classics [Department], as he had majored in Greek and Latin," and "... he always had a selection from one or the other [of these languages] 'for breakfast' on either side of his plate."

⁸⁶B. D. Woodward, in litt., 8 May 1902 to CBH (copy in files of VGS).

⁸⁷Only one of the four new species of fishes (the second mentioned) is currently considered valid; the other three are junior synonyms of species described earlier by other authors, who used different scientific names. This situation does not detract from the honors being accorded CBH by the authors of these three species.

spect I have never seen his superior. He produces portraits, figures, landscapes, seascapes, interiors and exteriors, in pen and ink, oil, or wash drawing; all with a degree of artistic excellence which to me is astonishing.”

On 12 Mar. 1903, CBH, who was in Detroit taking care of his ill father but also working on drawings for D. S. Jordan, wrote a letter to Jordan, at Stanford University, with a request, “I wish to ask a very great favor. You have, on one or two occasions, said that some of my drawings of fishes are the best that have been made in their time. A letter from you containing such an expression would be of the greatest value to me and I should appreciate it very highly.⁸⁹” Jordan responded to this request, 20 Mar. 1903⁹⁰:

“Dear Sir:-Referring to your drawings of fishes, permit me to say that of the many artists in that work who have arisen in this country and who have been employed at the United States National Museum and elsewhere, there are two whose work has been very distinctly better than that of any of the others, and who may be fairly said to have done the best work of the kind on record in any country. These two are Mrs. Chloe Leslie Starks⁹¹ and yourself. The excellencies [sic] of your work and those of hers are somewhat different, but we cannot speak too high praise of either.”

In Jordan’s 1922 two-volume memoir, “Days of a Man,” there is no mention of Chloe Starks, but Jordan continues to praise CBH, whose illustrations he

⁸⁹Department of Special Collections, Stanford University Libraries, SC058 D. S. Jordan, Box 36, Folder 352.

⁹⁰*Ibid.*, SC058, D. S. Jordan, Series Iaa, Box 7, v. 13

⁹¹Chloe Leslie Starks (1866–1952), attended Stanford University but apparently did not graduate; ultimately she became Associate Professor of Education (graphic arts) at Stanford; she was the wife of Edwin Chapin Starks, ichthyologist and Stanford professor of zoology. All of Chloe Starks published illustrations are in black and white; many of the original illustrations are present among the illustration files of the Smithsonian Institution’s Division of Fishes.

compares, more favorably, only to those of Albertus Hutchinson Baldwin, a good friend of CBH’s, and co-illustrator with CBH on Jordan’s 1901 expedition to Hawaii. In volume 2, page 87, Jordan wrote:

“Hudson’s fish paintings in oil are the finest yet made by any one. His custom was to draw first an outline sketch of a dead specimen, then paint from a living example in our aquarium at Waikiki . . . The obvious drawback to this system was that it could be applied only to relatively common forms, those we were certain soon to capture and keep alive. For several of the most interesting, only one or two specimens have ever been taken, and for these we had to be content with Albertus Baldwin’s more conventional method, good of its kind but necessarily in a different class.”

In volume 2, pages 277–278, Jordan wrote, “In it [Jordan and Evermann, 1905] we gave full accounts of the numerous species, with drawings of most of them and especially fine colored plates of several, these last the work of Charles B. Hudson, that most skillful of fish painters.” In a footnote to these remarks, Jordan mentioned that the paintings by Hudson and Albertus Baldwin, which were published in Jordan and Evermann (1905), were reduced to postcards and “have ever since found great favor with tourists.”⁹² In a second footnote, Jordan

⁹²Jordan’s remarks, published in 1922, refer only to postcards sold to tourists who visited the Waikiki Aquarium in Hawaii. The rare first publication (“Hawaiian Fishes,” Honolulu, Hawaii: Island Curio Co.) of the printings, which were to be issued later as postcards, was sold by the aquarium and published in Germany about 1910. It is hardbound and in leporello (accordion fold) format. We know of only two copies listed as present in U.S. libraries: Harvard University and the Smithsonian Institution (the latter gifted to the institution by Bruce A. Carlson, a former director of the Waikiki Aquarium). The Waikiki Aquarium opened in 1904, the year before CBH’s and Baldwin’s illustrations were first published by Jordan and Evermann (1905). The postcards were reproduced several times, most recently in 1990 and 1994 (Carlson, in litt., 13 Nov. 2007

continued

mentions, in referring to Hudson, that “This artist’s natural history efforts have been by no means confined to fishes. Several of the finest panoramic scenes in the San Francisco Academy of Sciences are by him.” Jordan (volume 1, page 238), probably intended to edit a comment he made, but unfortunately never completed his changes. We quote Jordan’s remarks on that page and, in italics, add what we believe is the sense of what Jordan intended:

“Upon leaving the Bureau of Fisheries, he [Barton Warren Evermann] became curator of the California Academy of Sciences, an office he has successfully filled [here replace comma with period.] *Evermann employed Charles Bradford Hudson, who painted a superb series of landscape groups in their natural environment, being the most striking features of the Academy Museum.*”

Charier (1924:15) reported on the 1924 exhibition of the Society of Independent Artists of New York⁹³ for a

⁹²[continued] to VGS). The 1994 edition (also a Carlson gift to the Smithsonian), if not the others, was published in booklet form. Information about the postcards sold by the aquarium was provided us by M. Heckman, Director of Education, Waikiki Aquarium, and Bruce Carlson.

Other postcards depicting CBH illustrated fishes, were issued and reissued by the Steinhart Aquarium in San Francisco, which opened in Sept. 1923 (McCosker, 2007:171), a year after Jordan (1922) published his remarks. Based on the combined holdings of the Division of Fishes and those of J. E. McCosker (director emeritus, Steinhart Aquarium, 1973–1994), 12 colored postcards were issued by Steinhart, of which 10 were by CBH, reproducing five of CBH’s illustrations of Hawaiian fishes and five of his North American trout species. The other two were of Hawaiian species illustrated by Albertus H. Baldwin. Hudson and Baldwin were the illustrators on Jordan and Evermann’s 1901 expedition to Hawaii.

The color reproductions, both in the booklets and on the separate postcards, are greatly wanting compared with either the original illustrations or their first appearances in scientific publications.

⁹³Founded in 1916; exhibition was open to any artist who wanted to show his/her work. The “1924 Catalogue of the Eighth Annual Exhibition . . .” indicates that it took place at the Waldorf Astoria Hotel, 7–30 Mar. CBH was listed as living at 817 [317] Alder Street, Pacific Grove, Calif. Each artist was allowed to exhibit one or two paintings, depending on their size. CBH exhibited only one painting.

French periodical devoted to the arts. He singled out the work of only a few of the 710 artists represented in the exhibition for comment, and also provided brief biographies of those artists. His remarks on CBH's submission, "Sunset, California Coast," are extracted here and translated. Charier also expressed his general appreciation and knowledge of CBH's paintings, which implies a familiarity with CBH's work that antedated the exhibition.

"At the Salon of Independent Artists, in New York, I liked greatly an effect of "Summer" on the "Coast of Monterey County (California)" done with infinite penetration by Charles Bradford Hudson. This example shows him to be a trained draughtsman, an adroit technician, and a delicate and vibrant colorist."

"This artist ... was among the best equipped to avoid the difficulties that are inherent to the landscape style."

"Loving nature greatly, he approaches her as closely as possible in his work, in effect as well as color. His favorite subjects are the sea [!], first, and then the sights of the desert. He has a marked predilection for the great French school, whose influence he admits to gladly."

"Having traveled widely, admired much, and above all, contemplated much, he interprets the scenes of nature with remarkable eloquence, imprinting them with an indescribable expression of calm and serenity, an impression of space and "vastness," which impart to his works an imperishable quality of beauty."

A partial English translation of the French article was published in the *Monterey Peninsula Daily Herald* for 4 Dec. 1924. We presume it was prepared by CBH, as it reads identically to a copy of his handwritten translation of a selected portion of the French article (both made available to us by his daughter, CHB).

Emilia Hodel, 9 July 1938, probably from the *San Francisco Chronicle*⁹⁴, in an article titled "Landscapes in New Exhibition at Gumps by Charles Hudson" wrote, "The Uptown Galleries have a variety of exhibitions this week. First in importance is the group of landscapes by the Canadian-American artist, Charles Bradford Hudson at Gumps."

An Anonymous author (1939b:4) in the *Christian Science Monitor*, 26 Aug. 1939 [just two months after CBH's death], wrote, "At the San Francisco branch of the Society for Sanity in Art⁹⁵ ... in so large a show it is impossible to detail all meritorious items. Excellent oils are by [14 artists' names follow, one of which is] Charles Bradford Hudson."

Behnke (1982), on the dust jacket of the hard-bound edition, and the front cover of the paperback edition, are five reproductions of *Salmo aguabonita* (see our Plate 15 F). Behnke (1982: xiii) wrote, "... drawn from life by the eminent artist Charles B. Hudson. It is reproduced from the Nineteenth Biennial report of the State Board of Fish Commissioners of the State of California, for the years 1905-1906."

Pister (2003:102) wrote, in reviewing Peter Moyle's (2000) book on California inland fishes, wrote: "Moyle resorts to accurate and distinctive line drawings, supplemented by an assortment of Joe Tomelleri's superb color artwork. Tomelleri is indeed a worthy successor to the legendary artist Charles Bradford Hudson, who accompanied and illustrated the efforts of Barton Warren Evermann in his pioneering studies of California's golden trout a century ago ..."

We and others have noted the similarity of CBH's and Joseph R. Tomelleri's colored illustrations of salmonid fishes. We thought it worth-

while to write Tomelleri and ask if the similarity was coincidental or if at some point he was influenced by Hudson's techniques. He graciously responded (in litt., 24 Feb 2006), "I would have to say [CBH] did not influence the technique, as we used different media ... his being painted, mine being drawn." CBH used watercolor, ink and gouache. Tomelleri wrote that he uses "solid pencil pigments" highlighted "with acrylic paint when needed ... That being said, I have admired [CBH's] work for many years. Dr. Robert Behnke has always spoken in glowing terms of Hudson's paintings, and Hudson's achievements are a benchmark for illustrators." This from one of, if not the foremost illustrators of fishes in the world today!

CBH's Non-ichthyological Illustrations in Publications by Other Authors

The following comprises an annotated listing of publications not authored by CBH, but that include his illustrations. Excluded are publications that include CBH's illustrations of fishes that he made for the USFC, USBF and California Department of Fish and Game. We discuss those in the section "CBH's Ichthyological Illustrations." Although we made a concerted effort to locate all the nonexcluded type of publications, our list is undoubtedly incomplete.⁹⁶ Even late in this study we continued to encounter publications we had missed earlier.

With few exceptions, we report only the earliest dated publication for a CBH illustration that appeared in more than one publication. Arrangement is chronological by year of first publication, but not necessarily chronological within a given year. Unless indicated otherwise, all illustrations are black and white or gray-scale, although one or both of his two paintings (current dispositions unknown) of the Fish Commission Schooner *Grampus* may have been in color. The year in which an illustration was prepared, if indicated by CBH, is given in the listing.

⁹⁶See also Anonymous (1982), below.

⁹⁴Article provided VGS by CHB.

⁹⁵Sanity in Art "is [was?] an association and a movement" founded by Mrs. Frank Granger Logan, who with her husband, had been issuing a medal and cash prize since 1917 for art. She wrote, "Sanity in Art Means Soundness, Rationalism, a Correct Integration of the Art Work Itself in Accordance with some Internal Logic." (Anonymous, 1937a).

The earliest CBH illustrations done for payment appear to have been drawn during 1882–85. These illustrations were apparently meant for archaeological or ethnological studies and done at Otis T. Mason’s request, although not necessarily for him, and were paid for by the Smithsonian Institution. In a few instances, the Smithsonian account ledgers for these years indicate the names of the authors or general references (usually annual reports) for which these early illustrations were intended. In no case, however, have we found any of these illustrations, either as originals (search of SIA and NAASI records or annual reports of the Board of Regents of the Smithsonian Institution).

On the other hand, Otis T. Mason’s diary (in NAASI), which covers the period 1884–91⁹⁷, has several entries for 1887 and 1888 indicating CBH’s work on studies for authors (during the period 1 July 1887–10 Apr. 1888), and we have located some, if not all, the publications for which these were intended. The earliest publications of the 1887 illustrations appeared in Willoughby (1889) and Merrill (1889).⁹⁸

The first published CBH illustration for Joseph W. Collins (who was employed by the USFC) was dated 1888, although based on Mason’s diary, work for Collins started in 1887. These drawings and others prepared for the USFC about the same time were all primarily concerned with boats and ships. CBH began a year of salaried work for the USFC on 1 July 1888 and was assigned to Collins, so it is not possible to distinguish CBH’s 1888 drawings made during that year from those that were started or made before he became a salaried USFC employee.

⁹⁷NAASI, Otis T. Mason papers, 49033.

⁹⁸Charles Clark Willoughby (5 July 1857–21 Apr. 1943), during his early adult years was an art dealer with an interest in archaeology. By 1894 he became employed by Harvard’s Peabody Museum as an assistant, ultimately becoming its director, 1915–1928 (E. A. Hooten (1943) published an extensive obituary). George Perkins Merrill (1854–1929), in 1887, was curator, Department of Lithology and Physical Geology, U.S. National Museum (SIA RU 7177, has an historical note and listing of holdings concerning him).



Small net used for catching small river salmon

Figure 20.—CBH illustration in Willoughby (1889:fig. 6), article on Quinaielt [Quinault] Indians; signed Hudson, lower left.

CBH is best known for his ichthyological illustrations of fishes (treated in another section), the first of which were done in 1896.

Willoughby (1889) published a study of the Indians of the Quinaielt [Quinault] Agency in the Washington Territory. It includes four pen and ink drawings, three portraying Indians, one of which shows an Indian using a small net to catch salmon. The fourth is an especially detailed scene, entitled, “Example of Quinaielt [sic] burial” (Fig. 20).

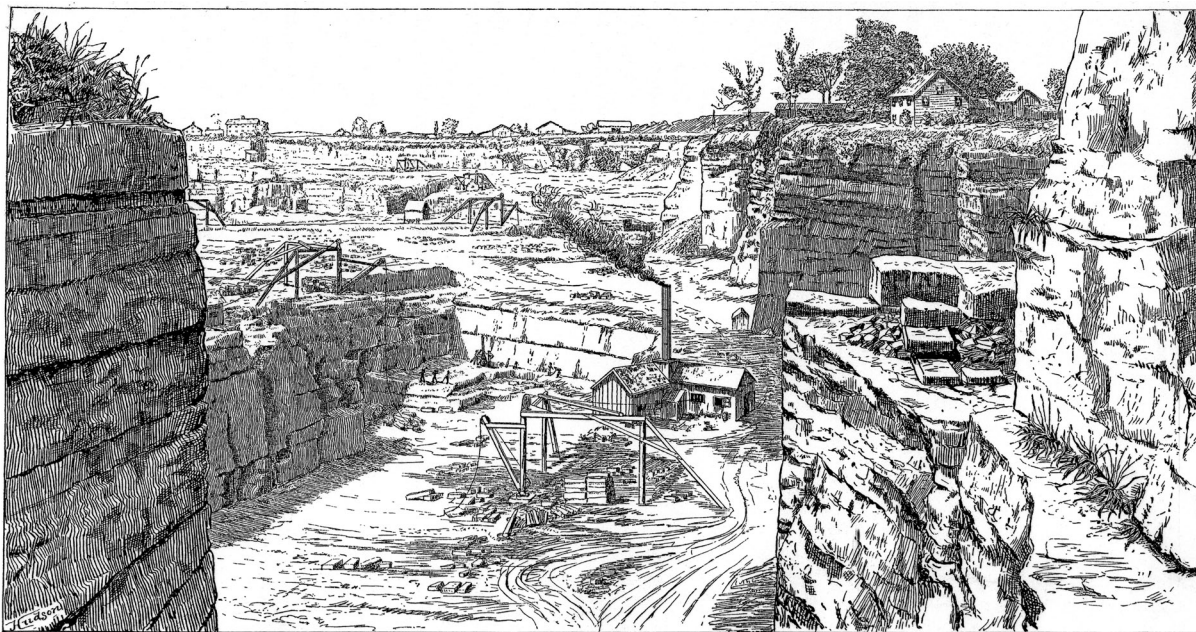
Merrill’s (1889) extensive article on the U.S. National Museum’s collection of building and ornamental stones includes five plates and two text figures prepared by CBH. All are pen and ink drawings. Four of the plates, based on photographs, concern rock quarries and are the most complex illustrations produced by CBH that we know of. We reproduce one of them as Figure 21.

Collins (1889:plate 9; our Figure 22⁹⁹) published an extensive report on beam-trawl fishing by European countries. It contained many illustrations, but only one, a scene of trawling cutters at Brixham, a port in southern

⁹⁹The original drawing for this illustration is preserved in the National Museum of American History Archives, Collection 256, Box 4, Folder 3.

England, is by CBH, it is dated 1888. It was undoubtedly based on a photograph or other illustration, perhaps a sketch by Collins, who was also a capable illustrator. The other vessels drawn by CBH during this early period were all done for, or closely supervised by, J. W. Collins (e.g. Watkins, 1891; Whitney, 1889–1891; Collins, 1901). Most were not published for 3 or 4 years after they were drawn (e.g. Collins, 1891a, b; Rathbun, 1892), but two (Collins, 1901: Fig. 14; plate 66) waited 13 years to be published.

Collins (1890) published “Fishing Craft of the World,” an almost encyclopedic article, including 18 illustrations prepared by CBH of various relatively small fishing vessels and boats. Fifteen of the illustrations are dated 1890, the other three are undated. The illustrations are detailed, although presumably the originals have been much reduced in size in the publication. We also presume CBH worked from models, photographs, or other illustrations, which now appear to be lost. Although Collins was employed by the USFC in 1890, we are uncertain whether CBH was so employed at the time of drawing, or whether he was paid for these illustrations on contract. We include four examples of the illustrations in Figure 23.



QUARRIES OF TRIASSIC SANDSTONE, PORTLAND, CONNECTICUT.
Drawn from a photograph.

Figure 21.—CBH illustration in Merrill (1889:plate 9) article on building and ornamental stones in the collection of the U.S. National Museum; signed Hudson, lower left.

Whitney (1891:5575¹⁰⁰) includes a detailed labeled line drawing of a sailing ship drawn by CBH (Fig. 24) in the *Century Dictionary*. The illustration is not credited to anyone, but his daughter, Claire, had a copy of it that her mother had excised from the dictionary and placed in her CBH files.¹⁰¹ Supporting this attribution is the editor's acknowledgement of Capt. J. W. Collins, USFC, for nautical information, on page 30 of "Writers and Authorities" in a supplement to volume 8 of the 1895 edition of the *Dictionary*. During the years 1889–90, CBH had prepared paintings and drawings of ships, both for and with

¹⁰⁰The first edition of "The Century Dictionary" was originally issued in 24 fascicles between 1889 and 1891; these were then combined variously into up to 10 volumes. Several editions were published through 1914. Page 5,575 was published in 1891 and is the same in all editions through the last in 1914 (James Mead, Division of Mammals, U.S. National Museum of Natural History, personal commun. Mead, a colleague and bibliophile, has copies of all editions of the *Dictionary*). The next edition, "The New Century Dictionary of the English Language," was published in 1952 and does not include CBH's illustration.

¹⁰¹CHB to VGS, in litt., 28 Feb. 1985, 10 Sept. 1988.

Collins (for the latter, see Watkins, 1891, and Collins, 1901). CBH's ship illustration appears on the same page (5,575) in all editions of the *Dictionary* through the last in 1914. In July 2008, a thumbnail of the illustration, which could be enlarged, appeared on a website advertising the *Dictionary*.

Hornaday (1891) published a book on taxidermy. The frontispiece (our Figure 25, upper) and plates 5, 7, 8, 10, 13, 16 (our Figure 25, lower), 19, 20, 21, and figures 18, 21, 23, 28, 54, 58, 69, 70, 72, 79 are by CBH. The frontispiece is dated 1889; plates 7, 8, 10, 19 are not dated, all other plates and figures are dated 1890. All the illustrations, except plate 19, a half-tone, are pen and ink drawings. Plate 16 was reproduced, without attribution to CBH, in Wonders (1993).¹⁰²

Mason (1891) includes six plates, all consisting of line drawings, dated as follows: two, '87; one, '88; three undated. All portray various aspects of handling deer skins and are indicated as "(After

¹⁰²Wonders did include a short biographical sketch of CBH on page 232 of her "Appendix: select list of diorama painters."

Shufeldt)" in the legends to the plates. In the lower left-hand corner of each plate are the initials WHC [= W. H. Chanlee] & CBH, positioned over the year date, if one is present. Chanlee illustrated a number of ethnological articles for the Smithsonian and was mentioned as jointly working with CBH "on Mr. Shufeldt's paper" in Mason's diary, although the diary does not indicate that either Chanlee or CBH were working on Shufeldt's paper in 1888.¹⁰³ In fact, CBH is only indicated as working for Capt. [J. W.] Collins or the Fish Commission after 16 Sept. 1887 and until 10 Apr. 1888. Because both Chanlee and CBH were working in close proximity, we suspect that CBH may have devoted only a minor amount of time to the Shufeldt project during early 1888.

Smith (1891) wrote a short article on the crab fishery of a small town on the Chesapeake Bay. The article included six plates, two by CBH; one, a small scene of crabbing from a "Chesapeake

¹⁰³We were unable to find any publication authored by Shufeldt that contained a CBH illustration.

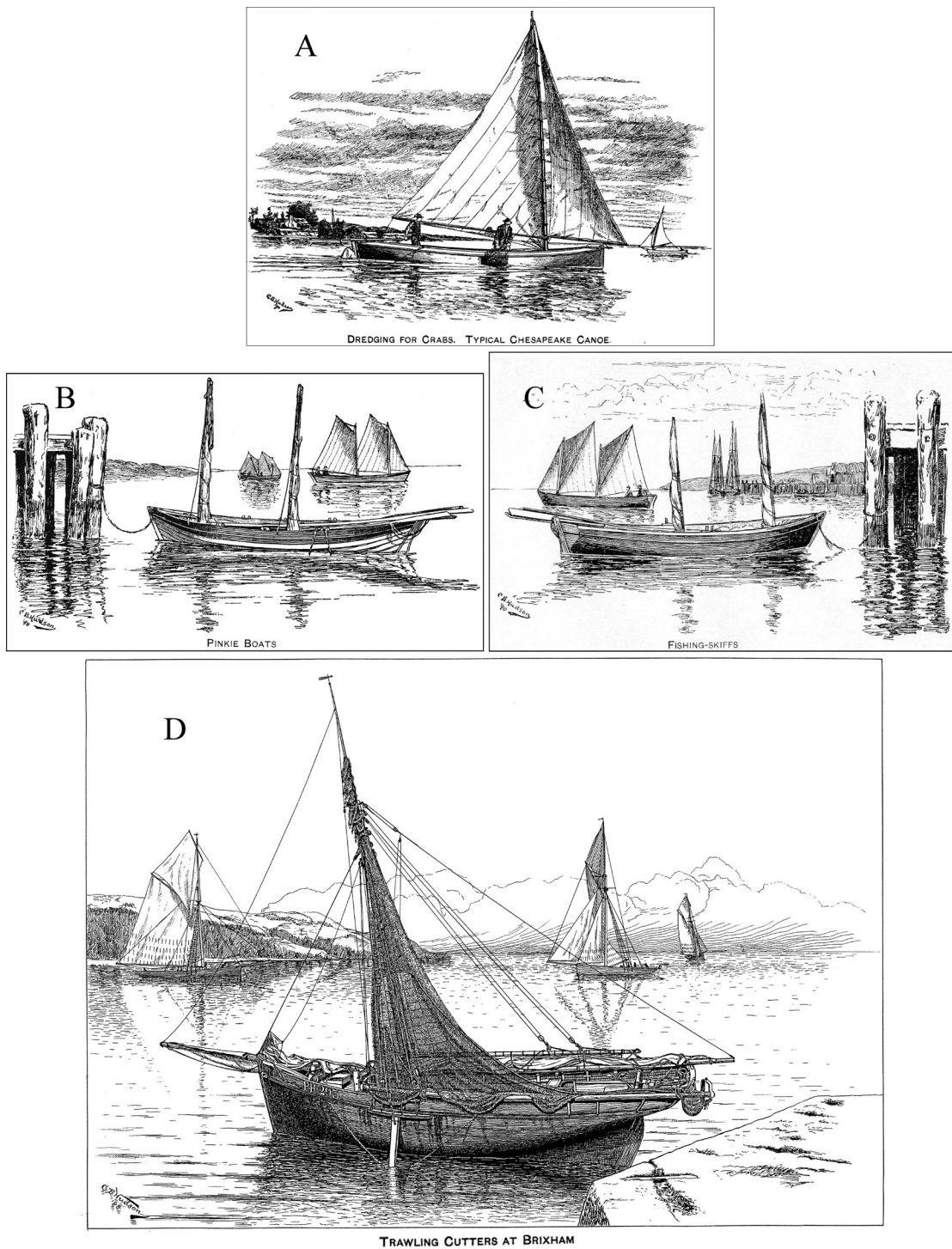


Figure 22.—Boats by CBH: A, dated 1890, from Smith (1891:plate 39); B, C, dated 1890, from Collins and Collins (1891:plate 9, 10), D, dated 1888, from Collins 1889:plate 9).

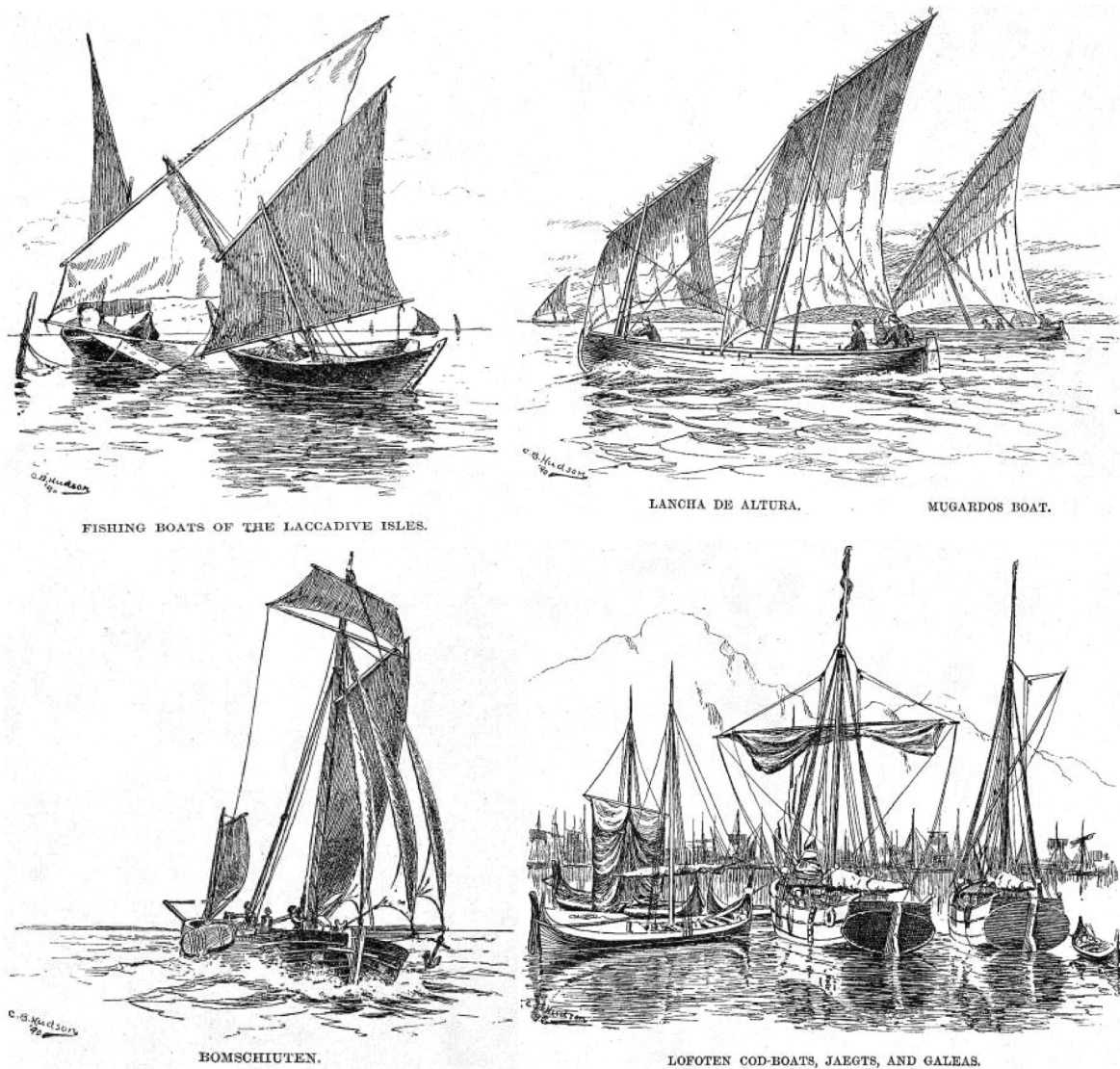


Figure 23.—Four of 18 CBH illustrations, each signed and dated 1890, appearing in Collins' (1890) on fishing craft of the world.

canoe;" the other, a simple one of a crab dredge.

Watkins (1891:plate 151) contains an illustration (reproduced as our Figure 26) of the steamship *Savannah*, reputed to be the first steamship to cross the Atlantic Ocean (1819). This illustration, which has been published subsequently in many different venues, was prepared in 1889 by CBH under the direction of J. W. Collins, and both their names appear at lower left on the painting. According to Watkins (p. 611), prior to this illustration, there were no reliable drawings

of the ship, and a "lithograph, faulty in many of the details of hull, sails, and rigging, has been the basis of all previous illustrations of this historic vessel." Following this remark, details are given by Collins explaining the basis for the reconstruction. The present location of the original painting is unknown, but an old photographic negative of it is present in the files of the Smithsonian's Photographic Services.

Collins (1891a) includes two pen and ink drawings of Great Lakes fishing boats by CBH:plate 1 (dated 1888) and

plate 4 (undated), which we reproduce in Figure 27 (upper two figures).

Collins (1891b) described the construction and equipment of the U.S. Fish Commission schooner *Grampus*, which he had designed. Among the many illustrations, plates 1, 5, 7, 8, 11 (all dated 1888), 6 and 9 (undated), and 10 (dated 1889) are pen and ink drawings by CBH. Collins' plate 1 (our Figure 28, upper) is a line drawing of the *Grampus* sailing to the left. It is based on, or served as a basis for, a CBH painting (Figure 29 upper), also dated 1888. The other plates

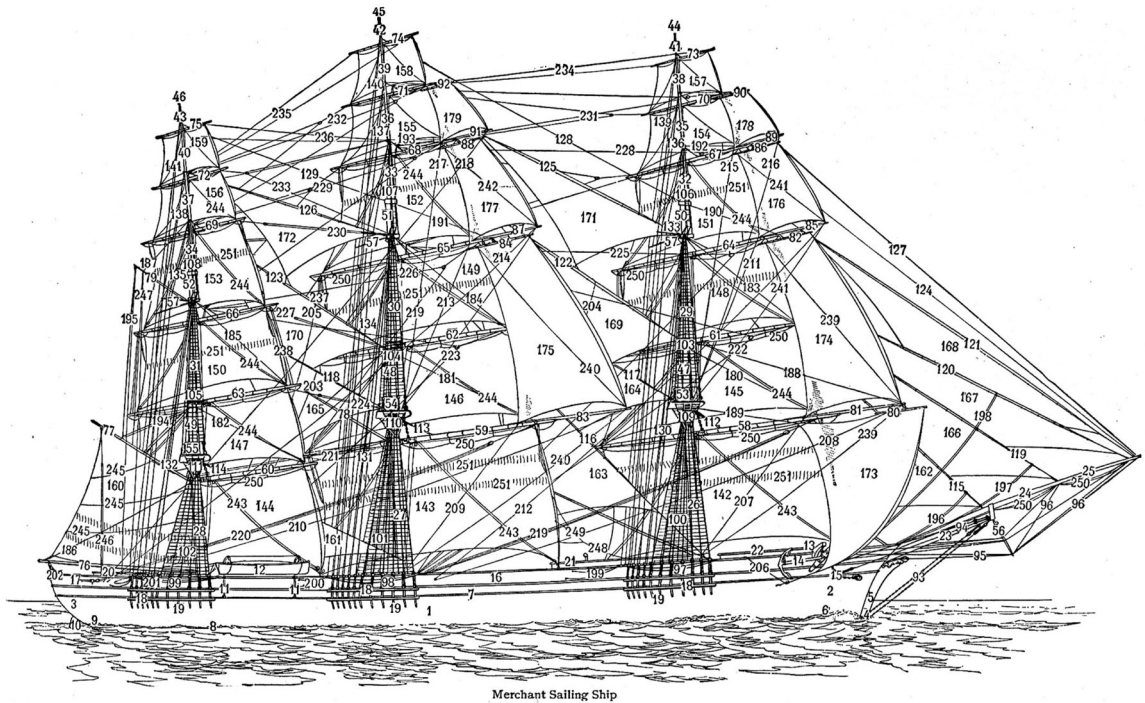


Figure 24.—Unattributed CBH illustration appearing on page 5,575 in all editions of *The Century Dictionary*, from the first (1889–91) through the last (1914). For accompanying figure legend, see the *Century Dictionary*.

are interior views of the *Grampus*, of which we reproduce plates 6 and 11 as Figures 28, lower left and right. (See remarks about Plate 1 following Ronnberg reference below.) The original drawing of plate 1 is present in the Smithsonian American History Archives, Collection 256, Box 4, Folder 3. It is much larger than the published version (or the one we reproduce in Figure 28. See also Collins (1987) and Ronnberg (1987), below, for further information and comments about the *Grampus*. Chapelle (1960:224) provided additional information on the construction of the *Grampus* and noted the presence of a model (No. 29832) of the ship in the National Watercraft Collection.

Collins and Collins (1891:plate 9–10) includes two CBH pen-and-ink drawings of pinkie boats and fishing skiffs, signed and dated 1890, which we reproduce in Figure 22 B, C. The Collins' report covers the period 14 Mar. 1887–30 June 1888, as indicated in the text, and it would appear that CBH's drawings were

made after his salaried position with the Commission had ended.

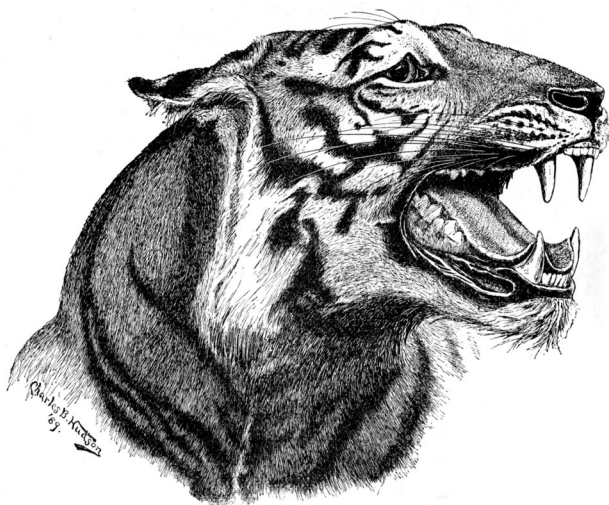
Libbey's (1891) plate 124 (reproduced as our Figure 29, lower) is a half-tone reproduction of a CBH painting, dated 1891 below his name, of the *Grampus*, sailing to the right. Except for the direction in which it is sailing, it is almost identical in appearance to CBH's 1888 painting of the *Grampus* sailing to the left upon which the line drawing shown in Figure 28 is based.

Lewis (1892) contains about 30 line drawings by CBH, all dated 1891, so far as can be discerned. The drawings cover a wide variety of subjects. We reproduce two of these: one on page 17 in Lewis, is reproduced in our Figure 1 (frontispiece), and the other, on page 21 in Lewis, we reproduce in our Figure 30. Of the two men in the left foreground of Figure 30, we suspect that CBH has included his own face on the man to the left and his father's on the man to the right. A short

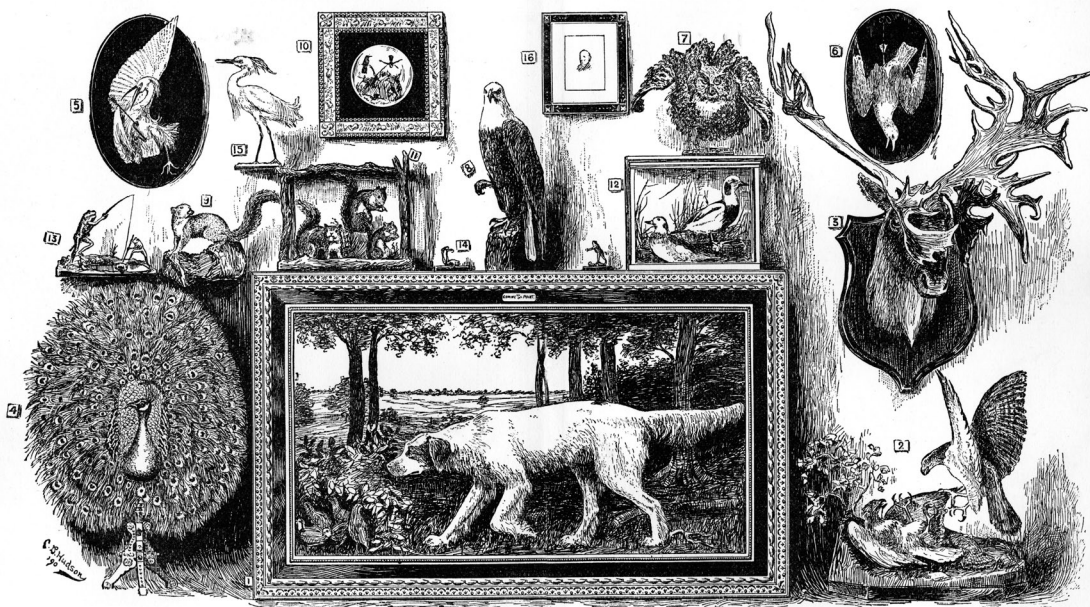
review of the Lewis book¹⁰⁴ contained the following remark, "To add to the attractiveness of his little collection it has been handsomely illustrated by Charles Bradford Hudson." *The Publisher's Weekly*, for 12 Mar. 1892, page 418, states that many of the poems, had "already been published in the *Philadelphia Star*, *New York Sun*, and *Frank Leslie's Monthly*, etc." We are uncertain if any of these included a CBH illustration.

Rathbun (1892) wrote a general article on the work of the U.S. Fish Commission. Of the many illustrations in this article, only one (on page 691), a pen and ink drawing of the steamer *Albatross*, dated 1888, is by CBH. Although there are many photographs of the *Albatross*, this illustration has been reproduced many times, and we reproduce it in our Figure 31. It may be the only illustration of the *Albatross* steaming under full sail.

¹⁰⁴*Washington Post*, 10 Feb. 1892, p. 4.



HEAD OF ROYAL BENGAL TIGER.



ORNAMENTAL TAXIDERM.

Figure 25.—Two CBH illustrations from Hornaday (1891): upper, frontispiece, dated 1889; lower, plate 16, dated 1890.

Collins (1892a:20), in an introduction to a group of articles on the fisheries of the Pacific coast of the United States, wrote, “The maps have mostly been made, under my direction, by Mr. C. E. Gorham; the other drawings for illustration have been prepared by Messrs. C. B. Hudson and A. H. Baldwin.” Among the numerous illustrations in these articles, there are none that can be

clearly attributed to CBH or Baldwin, except plate 18, which has a “B” in the lower left corner and possibly refers to Baldwin. In spite of Collins’ statement, some drawings (e.g. plate 15) include the name “H.W. Elliott.”¹⁰⁵

¹⁰⁵Henry Wood Elliott, 1846–1930, highly productive illustrator, among his other activities, for the USFC.

Collins (1892b), in an article on Pacific coast fishing vessels and boats, includes two pen and ink illustrations, both signed and dated 1889 by CBH. We reproduce Collins’ Plate 15, Figure 2, and Plate 16 in Figure 27.

Hornaday (1894a:601) includes a half-tone illustration of sea otters signed and dated 1894 by CBH.

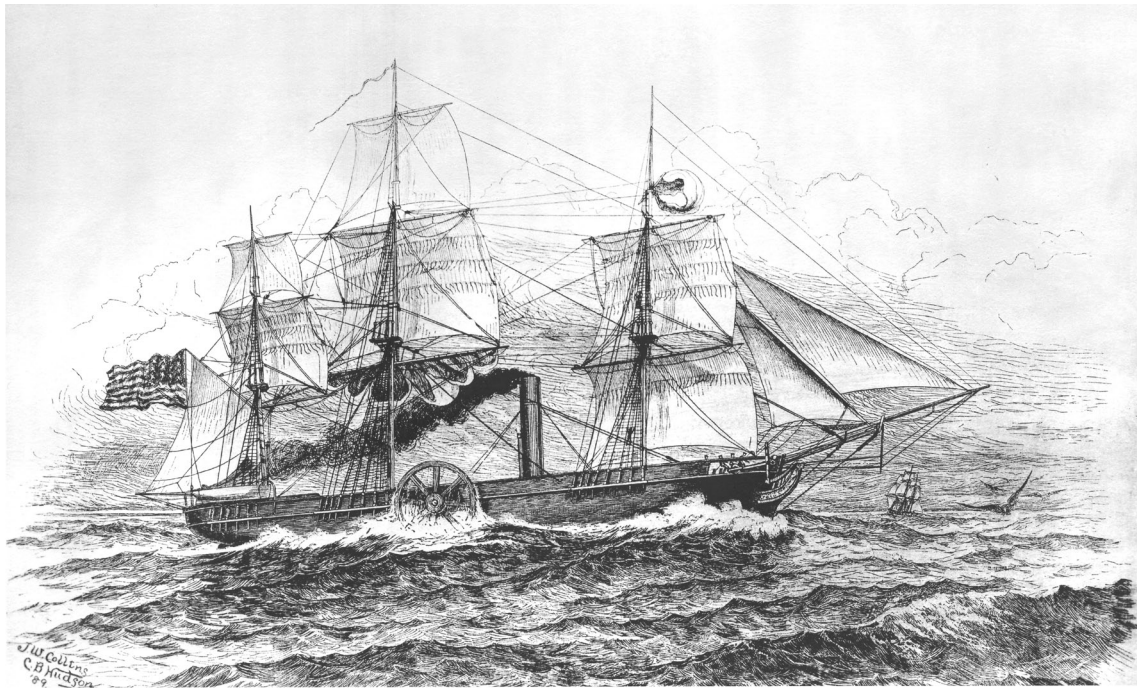


Figure 26.—Illustration from Watkins (1891:plate 151) of the steamship *Savannah*, reputed to be the first steamship to cross the Atlantic Ocean (1819). Illustration, dated 1889, prepared by CBH under the direction of J. W. Collins and signed by both men.

Hornaday (1894b:957) includes a fine, full-page half-tone illustration of a walrus being attacked by two Eskimos, signed and dated 1894 by CBH, reproduced by us as Figure 32.

Hornaday (1894c) contains five half-tone illustrations of sea lions and fur seals, and three, shown in habitat groups, are by CBH, all signed and dated 1894.

Yale (1894) published an article on American game fishes, which included eight CBH half-tone illustrations, all dated 1894. Three of the illustrations, brook trout, striped bass, and largemouth bass (Fig. 33), are essentially portraits. Three of the illustrations are excellent scenes of men fishing (of which we reproduce three, one in Figure 33 and two in Figure 34). A fourth scene, which we do not reproduce, is of a sailboat underway, on which one can just make out three men, one of whom is fishing. Unfortunately, the quality of some of our figures is lacking compared to that of those in the article from which we made our copies.

Hornaday's (1896) novel, "The Man Who Became a Savage," contains 16 illustrations [plates], all by CBH. Only the pen and ink frontispiece (first plate), unsigned, undated, and title page of this novel were seen by us.

Inman's (1898) novel includes four half-tone plates by CBH, all dated 1897. They show people and animals in various and usually fearsome situations, e.g. our Figure 35 (upper).

Webster's (1898) frontispiece (our Figure 35, lower), signed and dated 1898 by CBH, illustrates a hunter aiming a rifle at a crouching tiger. Hornaday (1899b:451) reported that the frontispiece was CBH's last illustration before leaving for duty in the Spanish-American War. If so, the illustration was completed before May 1898, as the *Washington Post* for 11 May 1898, reported that Lieut. Charles B. Hudson was among those encamped in the District of Columbia, and the issue for 22 May 1898, described the 21 May departure of the troops from the District. The troops returned on following 19 Aug. (historical sum-

mary in the *Washington Post*, 26 Dec. 1927).¹⁰⁶

Hornaday's (1899a) poem contains seven small CBH half-tone illustrations, initialed but not dated, variously depicting a wolf and a hunter and his horse in desert scenes.

Hornaday's (1899b) tribute to CBH, includes a full-page half-tone plate (page 450), signed and dated 1899, by CBH, that was to be included in Brown (1899; see below). It depicts white Rhodesian horsemen battling out-gunned African natives.

Barry (1899:460) includes a small CBH, initialed but undated, and uncomplicated, half-tone mountain scene; the legend reads, "In the Sioux country."

Brown's (1899) book about South Africa contains four half-tone illustrations, signed by CBH and dated variously 1898 or 1899. We reproduce one plate (opposite page 338 in the book) as our Figure 36. Brown gives special acknowledgment to W. T. Hornaday

¹⁰⁶*Washington Post*, information from ProQuest Historical Newspapers.

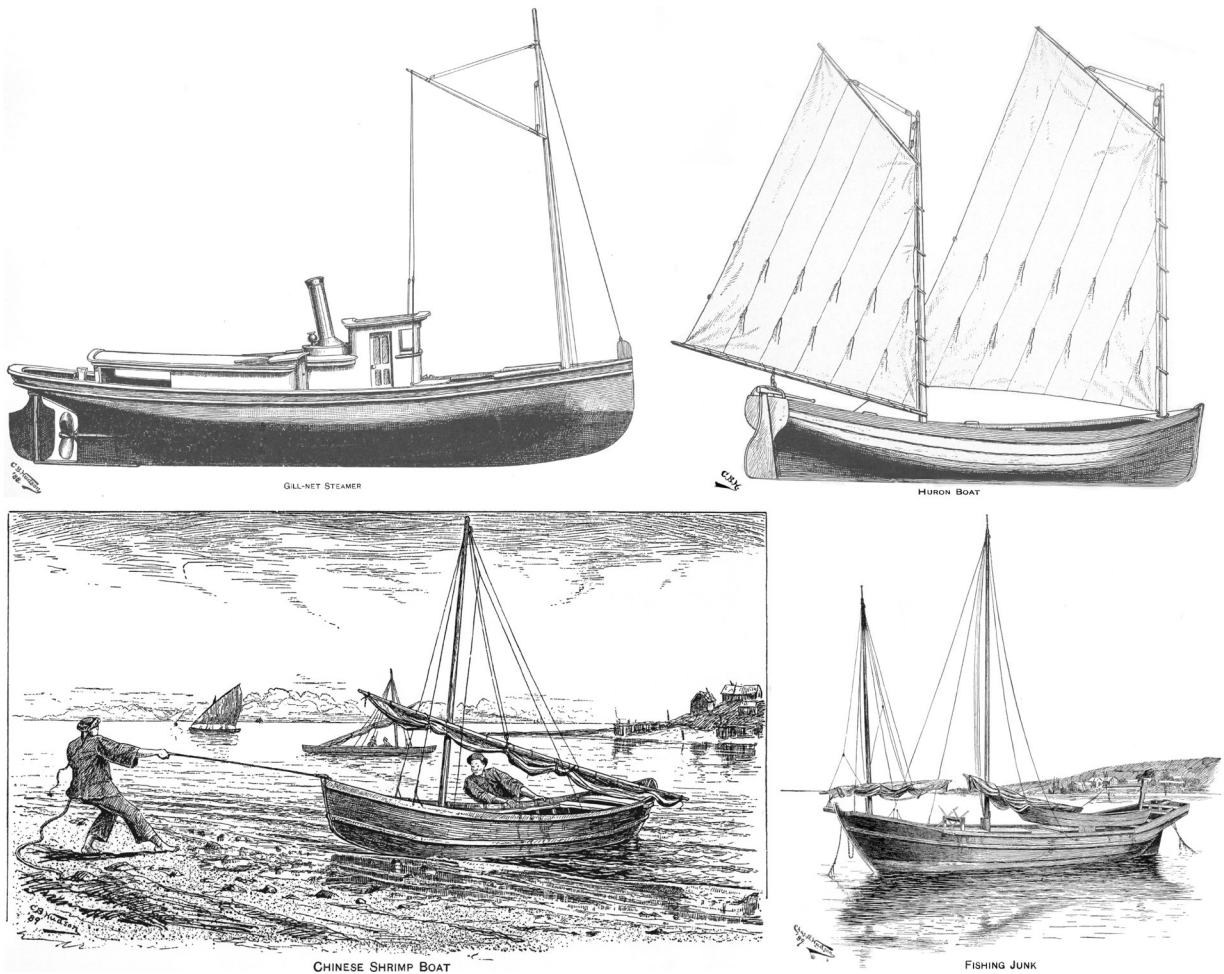


Figure 27.—Four CBH boat illustrations: upper two figures, Great Lakes fishing boats (from Collins, 1891a:plate 1 and 4), left dated 1888, right undated); lower two figures, Pacific coast fishing boats, both dated 1889 (from Collins, 1892b: left, Plate 16, right, Plate 15, Fig. 2).

for involving him in the expedition that led to the writing of the book, and it seems probable that Hornaday recommended CBH to Brown as an illustrator. See also Hornaday (1899b, above).

Henshall (1899:289) mentions in a footnote that “The pen-drawings of the oldest [fishing] reels are by Mr. Charles Bradford Hudson, except several by myself.” There are 13 drawings of fishing reels, excluding several line drawings of reel mechanisms. Six or seven of the reel drawings appear to have names of the artist in a lower corner, underneath four of which appears to be a year date. Our copy is not clear enough to discern the names or dates.

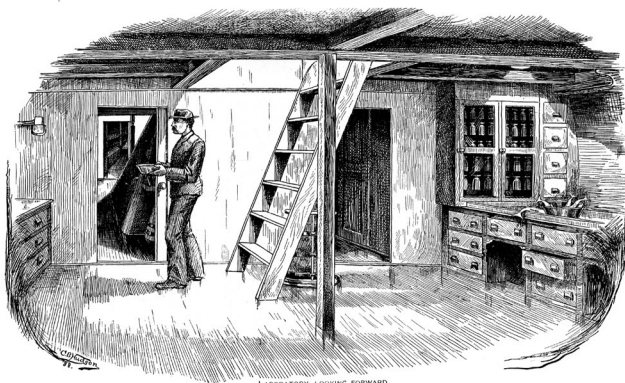
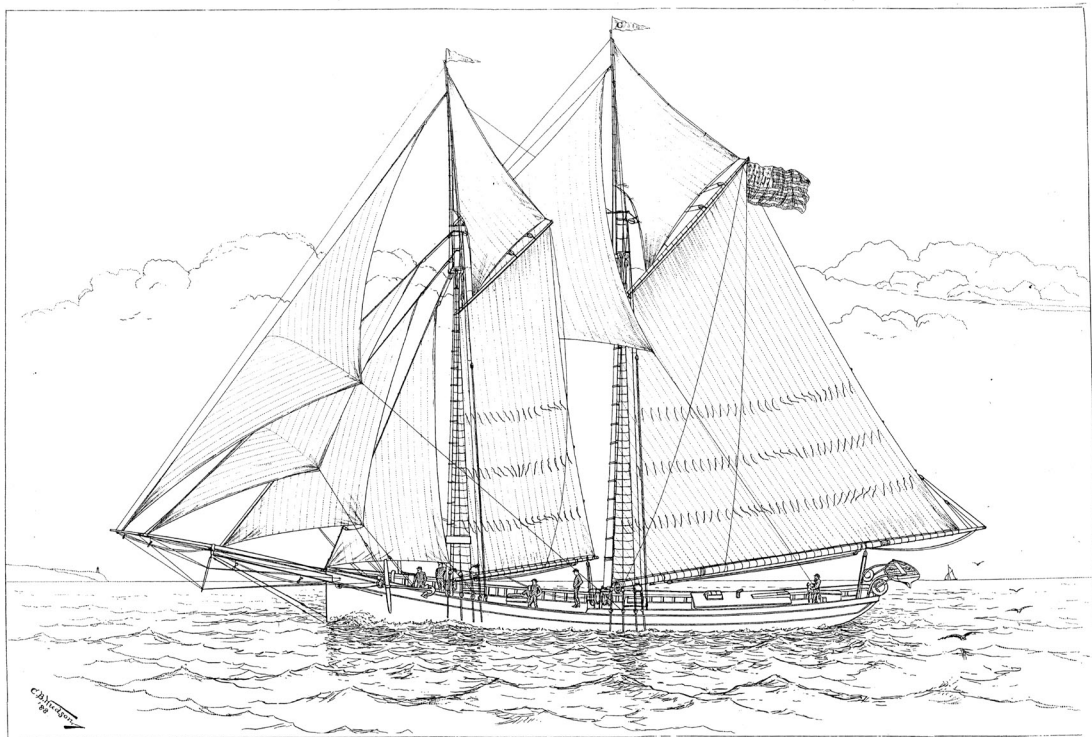
S. H.’s (1899) article is a poor attempt to be humorous by an author who chose to identify himself only by his initials. It includes two large and two small half-tone signed but undated CBH illustrations.

Sharp’s (1899) poem about his rifle includes five full-page, half-tone CBH illustrations, each dated 1899 and accompanied by a stanza of the poem.

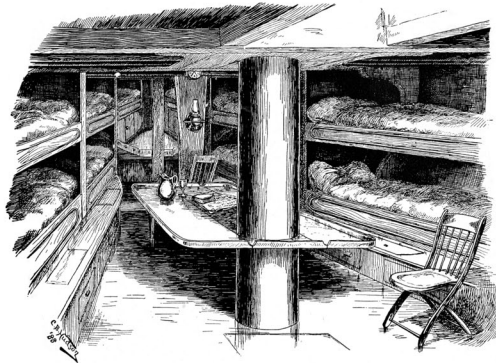
Allen (1900) has a half-tone frontispiece (with legend, “I killed 17 of them”) signed “Chas. B. Hudson 1900.” It illustrates a man riding a horse and aiming his shotgun at a high-flying flock of birds, and illustrates the author’s description of a tall tale told by a person who claimed to have shot 17 flying cur-

lews without a miss while riding along and keeping abreast of the flying flock.

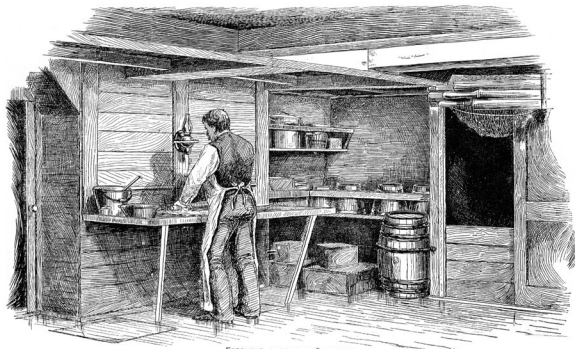
Collins (1901) published an extensive volume describing the USFC exhibit at the International Fisheries Exposition in Bergen, Norway, in 1898. Among the numerous illustrations, one (Collins’ plate 66, our Figure 37) is a detailed pen-and-ink drawing of a British trawler, and is initialed by CBH and dated 1888. The other (Figure 14, not reproduced here) is of a fishing sloop, less detailed and undated, but indicates that it was drawn by J. W. Collins and CBH. We presume that CBH’s early drawings of boats for the USFC were closely supervised by the demanding Collins, who prepared many excel-



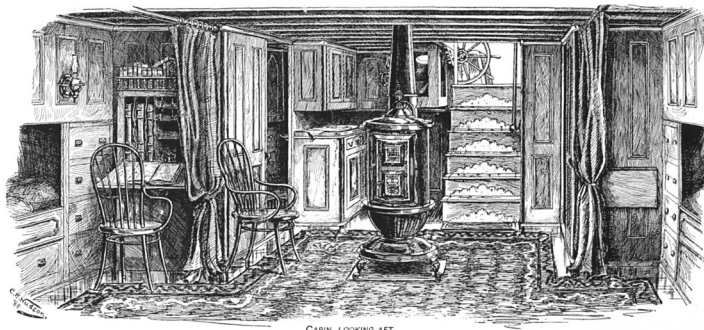
LABORATORY, LOOKING FORWARD.



FORECASTLE, LOOKING FORWARD.



FOREHOLD, LOOKING TO STARBOARD.



CABIN, LOOKING AFT.

Figure 28.—Five of eight CBH illustrations (all but one dated 1888) of the U.S. Fish Commission schooner *Grampus*, which first appeared in Collins (1891b) and indicated as plates. Upper figure (plate 1) is based on, or served as basis for upper illustration in our Figure 29. Mid-left figure (plate 8) above is “Laboratory looking forward;” mid-right figure (plate 5) is “Forecastle looking forward;” lower left figure (plate 6, undated) is “Forehold looking to starboard;” lower right figure (plate 11) is “Cabin looking aft.” Figures much reduced in size from original published versions. The three other Collins (1891b) plates are reproduced in Cart (2004:16).

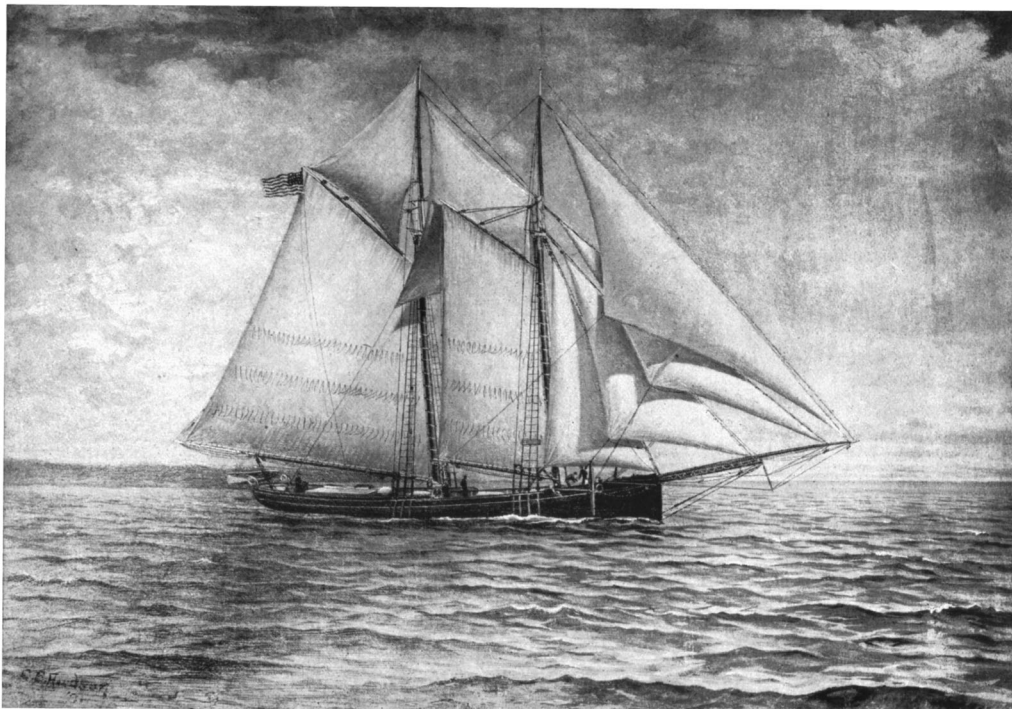


Figure 29.—Charles Bradford Hudson's paintings of the *Grampus*. Upper, dated 1888, print from negative in files of Smithsonian Imaging Services (see also Figure 28); lower, dated 1891, copied from Libbey (1891:plate 124). Originals possibly in color; both now lost.

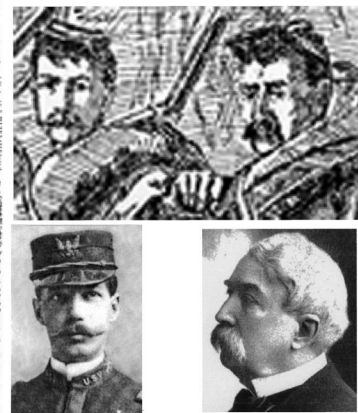
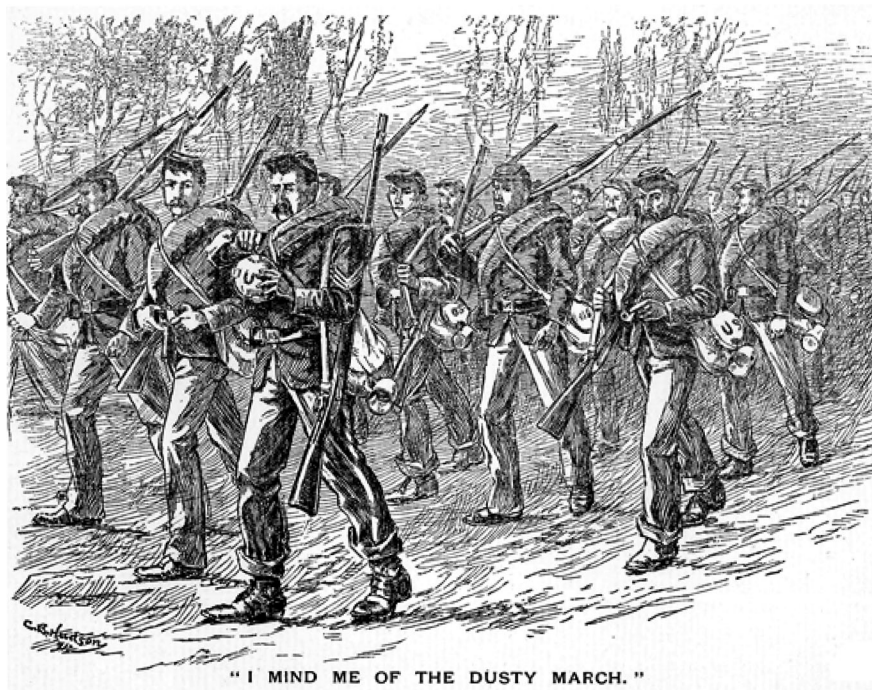


Figure 30.—Left, CBH illustration in Lewis (1892:21); upper right, enlarged faces of two men in left foreground of illustration; below, lower left, Lieutenant CBH (from Hornaday, 1899b:449); lower right, CBH's father, T. J. Hudson (from Hudson, 1904). Composition in support of our presumption that CBH included his own and his father's faces in the illustration.

lent drawings of ships during his time with the Commission. CBH would have been a quick study and after brief instruction would have needed little supervision. Collins (1901:17) noted that CBH was awarded two medals for his illustrations at the exhibition: a silver one for his “drawings of fishing vessels and boats,” (for an illustration of the medal, see Hornaday, 1899b:449), and a bronze medal “for [a] painting illustrating [a] method of fishing.” Collins (1901:49) described the painting as a “fleet of American schooners fishing for mackerel with hook and line; entitled ‘Mackerel fishing in the fifties.’” It is unfortunate that Collins did not reproduce this painting in his, otherwise comprehensive volume. The present location of the painting, if it exists, is unknown.

Burroughs' (1902) narrative of the Harriman Alaska expedition of 1899, includes a fine photogravure reproduction, opposite page 94, (which we reproduce as Figure 38) of a CBH painting. The legend reads, “Sea-Lions, Pribilof Islands, Bering Sea,” signed and dated 1900. It appears that the painting on which the lithograph was based was once hanging in the home

of Mrs. Edward H. Harriman¹⁰⁷, and it is the basis for reports in biographical

¹⁰⁷A black-and-white CBH painting was hanging in Arden House, home of Mrs. Edward H. Harriman, during 1917. G. P. Du Bois (1917), stated (on p. 296), “In the upper hall there are sea lions in black and white by Charles B. Hudson that probably were executed during the Harriman Alaskan Expedition.” CBH, however, did not participate in the expedition. We tried unsuccessfully to locate the painting. Sarah Elliston Weiner, Curator of Art Properties, Columbia University Libraries Special Collections (in litt., 10 June 2008, to D. H. Mortimer, Columbia University; cc to VGS), wrote that there was a record of a CBH painting, “Seals on Rock,” briefly described as a group of seals at the seashore, in an inventory of the paintings in Arden House. The description closely fits the published photogravure. The inventory did not include a photograph of the painting, but it is described as being oil on board, approximately 8 inches high, 14 inches wide, therefore, approximately twice the size of the published photogravure, which is 4 1/16” by 7 3/16”. The location of the painting in the home was given as “4th floor, bathroom closet.” Mortimer (in litt, 10 June 2008) wrote that the inventory is probably 15 years old, so that it is not definite that the painting is still in the house. “The Harrimans gave ... Arden House to Columbia in 1950. Three and a half years ago the university closed it and sold it to a conservation organization. Much of the noteworthy art has been dispersed and the house has remained boarded up ... The last time I was in the house, the walls were quite bare.” The painting was probably based directly on a photograph taken on the Harriman Expedition, as is the other CBH lithograph published in the Harriman expedition series (see C. H. Merriam (1902) below); its disposition is also unknown.

sketches of CBH that his paintings are included in the Harriman collections.¹⁰⁸ The present location of the painting is unknown. Burroughs' article also includes two other CBH illustrations, both small linecuts signed and dated 1900. On page 78 of the article is a scene, “Uyak Bay, Kadiak Island,” showing a section of the bay in the foreground with vegetation on the shore and mountains indicated in the distant background. On page 95 is a scene, “Sea-lions,” illustrating eight sea lions resting on rocks.

Muir (1902), who wrote on Pacific coast glaciers in the Harriman Alaska expedition report, included on page 124, a small CBH linecut signed and dated 1900, and labeled “Mountains on Lynn Canal opposite Davidson Glacier.”

Grinnell (1902a), who wrote on Alaska natives in the Harriman Alaska expedition report, contains three very small linecut figures by CBH, all initialed but not dated: on page 156, a carved two-headed dancing mask and two perspectives of a carved curved mixing bowl (both views initialed); on

¹⁰⁸For example, the obituary announcement of CBH in the *Monterey Peninsula Herald*, for 28 June 1939.

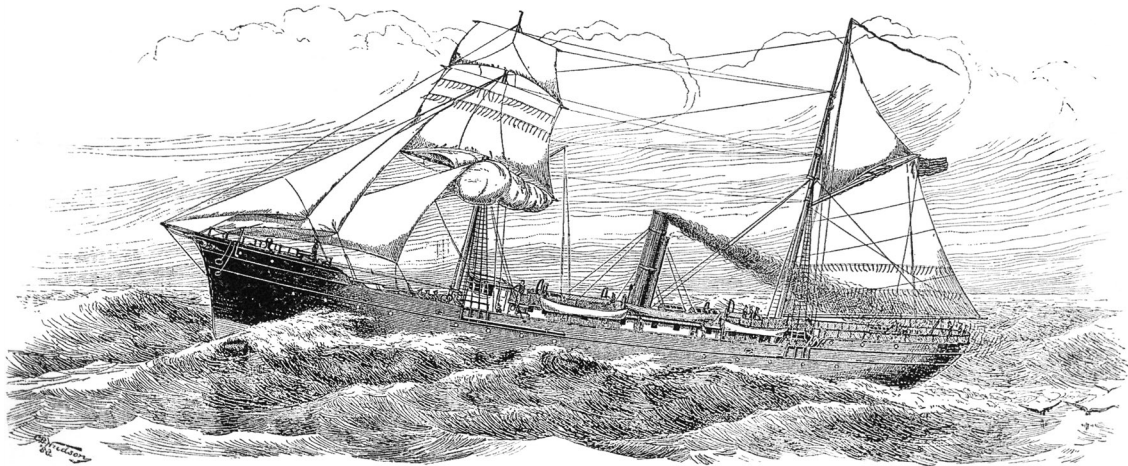
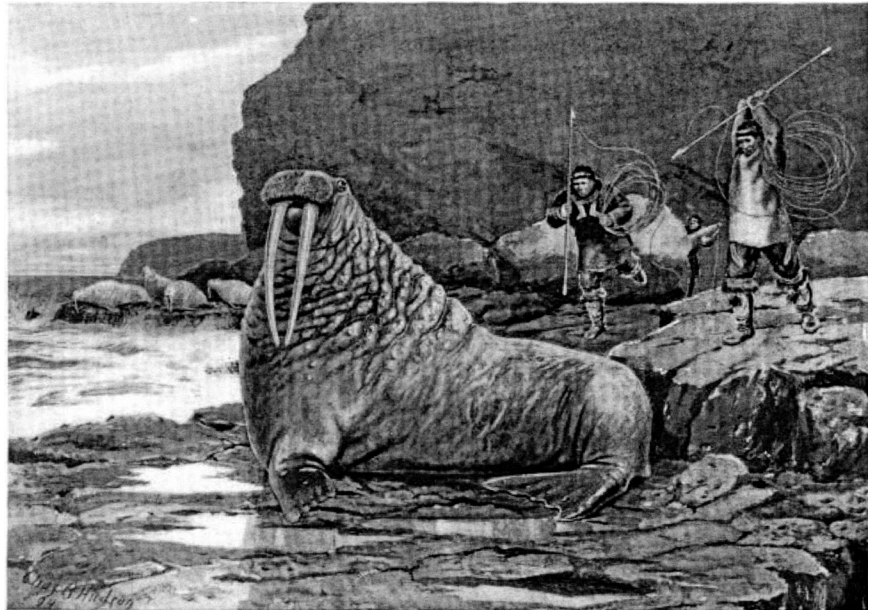


Figure 31.—CBH illustration, dated 1888, of the U.S. Fish Commission steamer *Albatross* (first appeared in Rathbun, 1892:691). Possibly the only illustration of the *Albatross* underway in sail.

page 178, an Eskimo dish carved from a whale vertebra.

Merriam (1902) wrote an article on a new volcano discovered during the Harriman Alaska expedition. The article includes two CBH illustrations. One is an unsigned and undated linecut on page 329, entitled “Fig. 37. Murres,” and shows a group of auks, diving birds of northern seas, perched on a cliff. Its attribution to CBH is made in the list of text figures in volume 1 of the Harriman Alaska Series. The other illustration, opposite page 332, is a photogravure entitled “Stampede of Sea-Lions, Bogoslof Volcano, July 8, 1899,” based on a CBH painting dated 1900. By chance, we found that this illustration is a composite that was based on three photographs taken by Merriam.¹⁰⁹ In our Figure 39, we reproduce CBH’s illustration and the three photographs on which it is based. The sum of these elements provides an



THE PACIFIC WALRUS.

Figure 32.—CBH illustration, dated 1894, appearing in Hornaday (1894b:957). Our reproduction of figure suffers in quality compared to the published original.

¹⁰⁹The three photographs, by C. Hart Merriam, are on page 152 of volume 2, of “A Souvenir of the Harriman Alaska Expedition, 1899,” which is a two-album collection of individually mounted photographs taken during the Harriman Alaska expedition. Probably only a few sets of the albums were prepared. The Library of Congress does not have a set; however, sets are present in the libraries of: American Museum of Natural History, N.Y.; University of Texas, Austin; Alaska State Library, Juneau; University of California, both Berkeley and Los Angeles; Yale University, New Haven, Conn.; Hamilton College, Clinton, N.Y.; and University of Washington, Seattle.

excellent and unique example of CBH’s creativity.

Gannett (1902:278) is here included arbitrarily as a part of Gannett’s article. It only contains a signed CBH linecut figure, dated 1900, of a group of fur seals based on a photograph taken by C. H. Merriam. The figure is a gratuitous insertion that belongs neither to

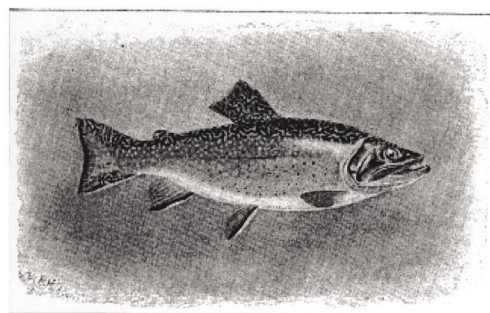
Gannett’s article nor the article following Gannett’s in the volume.

Grinnell’s (1902b) article on the Alaska salmon fishery includes six CBH signed and dated 1900, linecut text figures. The sixth figure, a large group of seals on a rocky shore, is all that is on the last page, and it is not actually a part of Grinnell’s article,

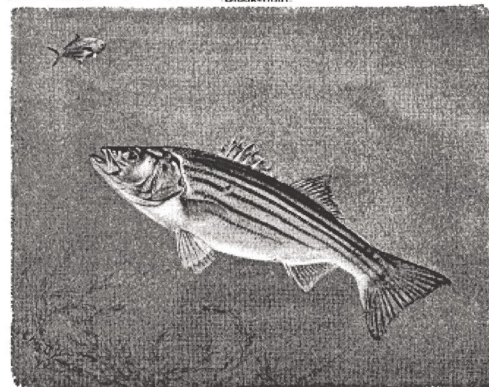


Black-bass Fishing—Cast at Dawn.

Figure 33.—Four 1894 CBH illustrations appearing in Yale (1894). Left side: largemouth bass fishing. Right side, from top: brook trout, striped bass, largemouth bass. Quality of figures in original publication is superior to that reproduced here.

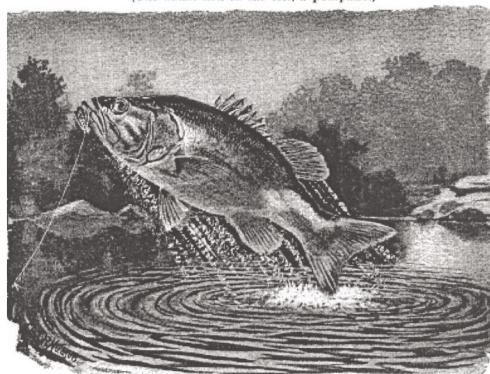


Brook-trout



A Striped Bass.

(The small fish to the left, a pompano.)



Large-mouthed, or Oswego, Black-Bass.

but it was inserted, apparently, to separate his article from the next one in the volume, with which it is also irrelevant. CBH indicated that the first five figures (scenes associated with the salmon fishery) were based on photographs. The figure of the seals lacks a legend.

Dall's (1902) poem contains one CBH figure, a small linecut, signed and dated 1900. It shows a group of Alaska natives seated and standing around a fire in an otherwise darkened enclosure. It lacks a legend but was used to illustrate a passage in the poem.

Evermann (1905) wrote a popular article about the golden trout of Mt. Whitney in California. In it, Evermann included a full-page reproduction of a black-and-white CBH etching, signed and dated 1904, and entitled "a shoulder of Mt. Whitney." In a letter to Evermann, written in Detroit and dated 29 Sept. 1904, CBH wrote, "I will send you tomorrow, or the day after, an etching of Crabtree Meadow¹¹⁰, made from the water-color sketch. I have made the plate between times, and have made a

number of prints on Japanese paper, one of which I intend to present to each of our party as a memento of the expedition. I do not know whether you are partial to etchings or not—I am—but I hope you will be partial to this one on account of association.¹¹¹" Although not certain, it appears that the published figure is the etching of which CBH wrote. We suspect, however, that CBH made many watercolor sketches during the Mount Whitney expedition.

Hornaday's (1906) book on camping in the Canadian Rocky Mountains has been reprinted several times. It includes only three plates, all halftones, which are credited to CBH. The plate, facing page 196, is captioned "Mr. Phillips's Most Dangerous Position;" that facing p. 286, "A Great Snow-slide" [drawn from photograph]; that facing p. 334, "Risking His Life for a Kid."¹¹² The

first illustration is either based on, or was a study for, a CBH painting in color, 12" × 16.75" (305 × 425 mm), oil on board, which was auctioned by Cowan's auction house of Cincinnati, Ohio, as item 349, on 31 Mar. 2007, and listed as "Daring photographer in western landscape" (which sold for \$1,375). Perceptively, the painting was indicated as a possible study for an illustration. We reproduce both versions in Figure 40.

Anonymous (1914) is a Luther Burbank seed catalog. It contains one full-page color illustration, opposite page 48, "The Burbank Poppies," signed

¹¹⁰At the foot of the western approach to Mount Whitney.

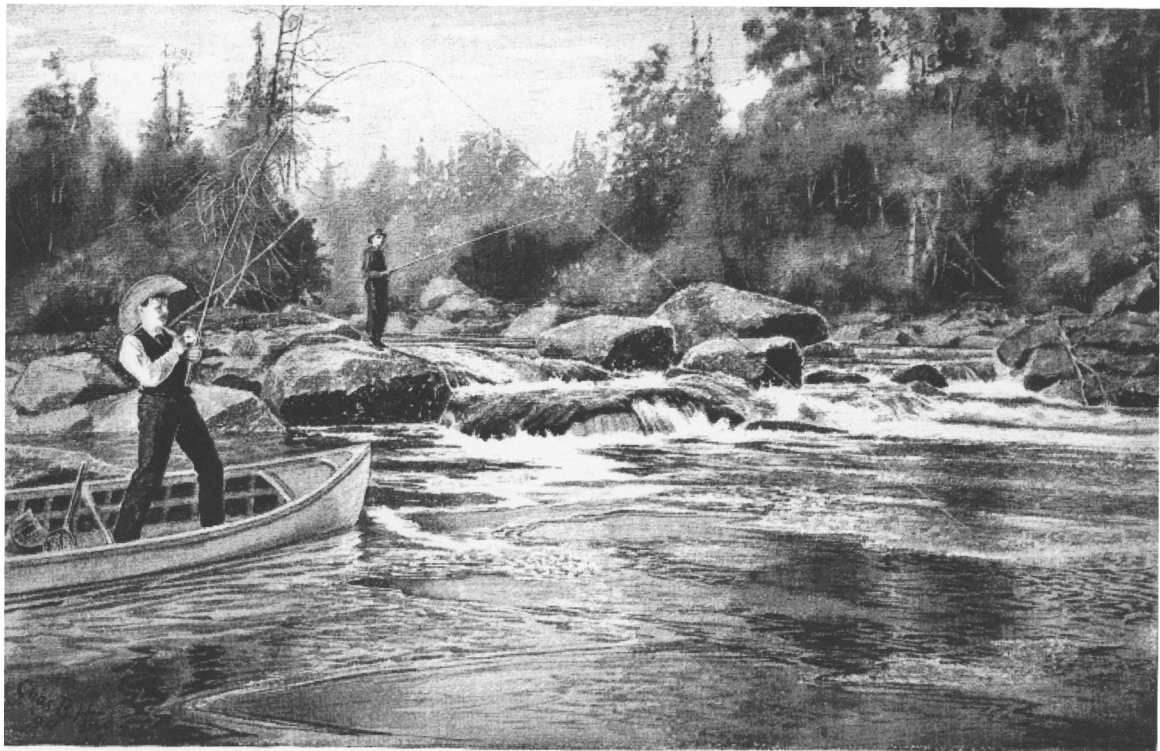
¹¹¹CASA, B. W. Evermann letter files, Box 75.

¹¹²A young mountain goat. Similar to the illustration mentioned in the previous footnote, a CBH oil painting for this plate probably exists.



DRAWN BY CHARLES S. HUDSON.

Gaffing a Striped Bass.



DRAWN BY CHARLES S. HUDSON.

Trout Fishing—a Strike.

Figure 34.—Two 1894 CBH fishing scenes appearing in Yale (1894).



“With one vigorous thrust of his knife he struck the animal’s heart.”



“HE SALLIED FORTH, GROWLING HORRIBLY AND GIVING ME A FINE VIEW OF HIS OPEN MOUTH.”

Figure 35.—Two CBH illustrations: upper, dated 1897, appeared in Inman’s (1898) novel, “Ranche on the Oxhide;” lower, dated 1898, appeared in Webster (1898), and according to Hornaday (1899b:451) was CBH’s last illustration before leaving for the Spanish–American War.

“Hudson 1909” (Fig. 41, left) This and/or other CBH illustrations, including those mentioned in Anonymous (1982),

probably appeared in other Burbank catalogs, but this was the only catalog available to us.¹¹³

¹¹³Smithsonian Libraries, National Museum of American History Branch, Trade Literature Collection, call no. 014896, barcode 390880 03837648.

Evermann's (1917) plates 10 and 17 are full-page half-tone photographs of two California Academy of Sciences dioramas for which CBH painted the backgrounds; acknowledgments to him are on pages 280 and 294.

Anonymous (1982) contains a placard and seven color prints of fruits and vegetables, cultivars developed by Luther Burbank, on heavy paper, the prints suitable for framing. The placard states that the paintings were done in 1909. Four of the prints bear CBH's name and 1909; the other three bear neither. The front of the placard has brief biographies of Burbank and CBH. The rear of the placard describes the fruits and has acknowledgments, including CBH's daughter, Claire Hudson Brett, for historical information. We reproduce one of the prints as our Figure 41, right. The prints are still available (2008) for purchase from the Luther Burbank Home & Gardens (see also Anonymous (1914)).

Collins (1987) is a reproduction of Collins' (1891b) report, with type reset. It includes all eight CBH illustrations, enlarged, that appeared in the original publication.

Ronnberg (1987:182, Fig. 1) includes CBH's 1888 painting of the *Grampus*, sailing to the left (our Fig. 29, upper). Either Ronnberg's publication or that of Backus and Bourne (1987, see below) was the first to publish a reproduction of this painting. Ronnberg mentions that the painting was probably done in tempera and, perceptively, recognized that it is so similar to CBH's 1888 line drawing of the *Grampus*, which appears as Plate 1 in both Collins (1891b) and (1987), that the latter was undoubtedly based on the painting.

The 1888 painting, when photographed at the Smithsonian, was framed and under glass, and an accompanying label with the ship's name had split in half. We presume that the 1888 painting, which was unpublished for almost 100 years, was probably hanging in someone's office or forgotten, so that a new painting was requested for the article by Libbey (1891). CBH probably remembered his original painting, and reoriented the sailing direction of the *Grampus*, in order not to duplicate his



The Rhodesia Horse Encounter the Matabeles.

Figure 36.—CBH illustration, dated 1899, that appeared in Brown's (1899) book, "On the South African Frontier."

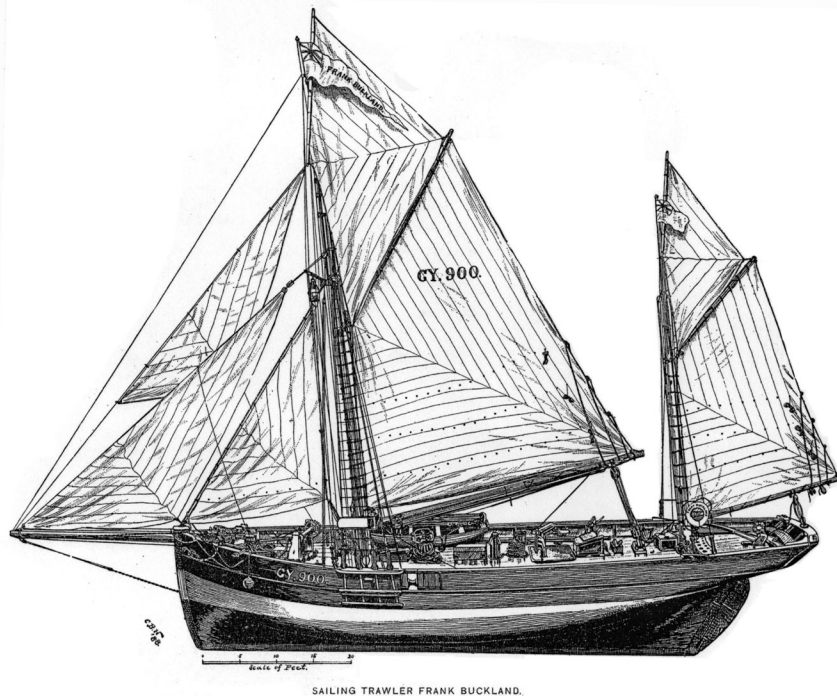


Figure 37.—CBH illustration dated 1888 (from Collins, 1901:plate 66); one of several drawings of fishing vessels for which he was awarded a silver medal at the 1898 International Fisheries Exposition in Bergen, Norway.

original. Our many concerted attempts to locate the original 1888 and 1891 paintings over the course of many years were unsuccessful.

Backus and Bourne (1987:4) published a photograph of CBH's 1888 painting of the U.S. Fish Commission schooner *Grampus*, sailing to the left,

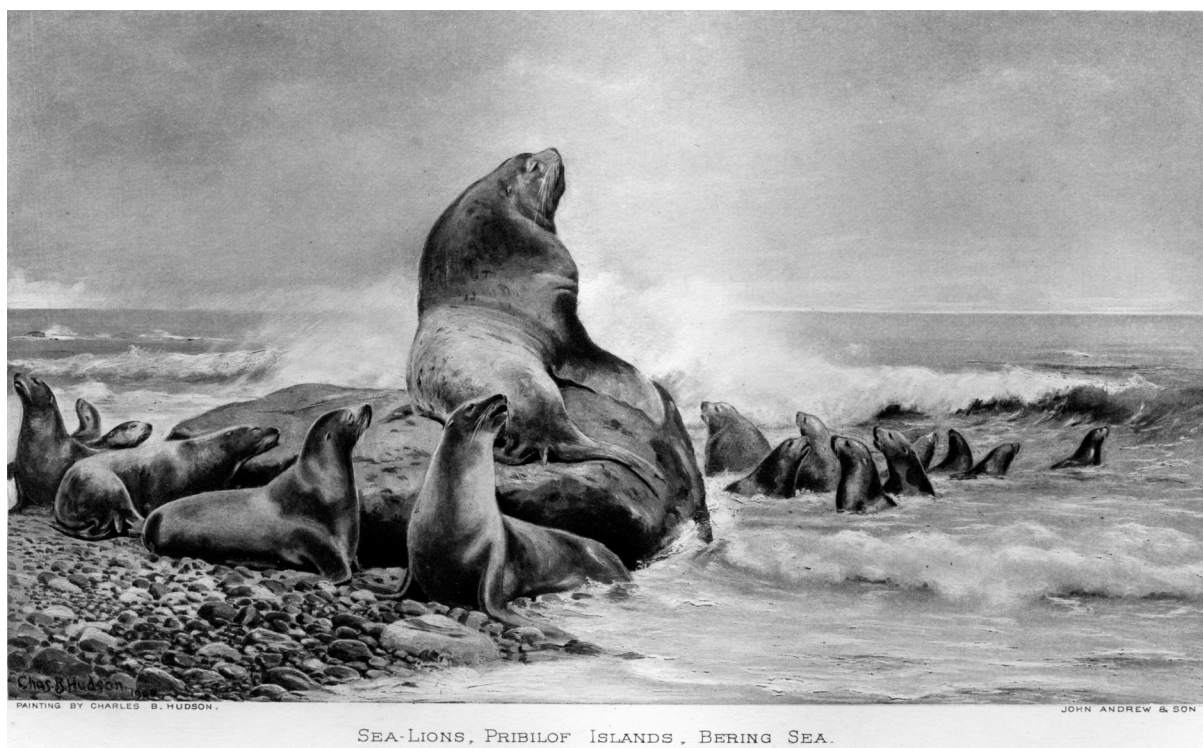


Figure 38.—CBH photogravure, dated 1900, published in Burroughs (1902) and based on a painting formerly owned by the E. H. Harriman family; present disposition of painting unknown (see also note in discussion of Burroughs' 1902 article).

based on a print made from a negative (#4969) in the files of the Smithsonian Institution Imaging Services (see Ronnberg (1987), for discussion). They did not discuss the image.

Shields (2006:11) introduces his Chapter 5 with a quotation from CBH's 1915 article, "Monterey on the etching plate" (q.v.). On pages 117–118, he quotes extensively from the article and reproduces one of CBH's etchings that were included in it. Shields credits CBH with representing the deep concern felt by the artists' community resulting from the modernization and deterioration of landmarks and native buildings of the area. On pages 228–230, Shields presents a brief biographical sketch of CBH, including general comments on CBH's landscapes and seascapes. Page 229 includes a color reproduction of a CBH painting, "Spanish Bay" (also our Figure 42), in the collection of the Crocker Art Museum. Much enlarged, and rendered in subdued tones of tan, Shields used this painting as the background on which his book's title page is printed.

CBH Authored Publications

CBH's publications are noteworthy for their variety, facility of expression, and often for their humor. Included among those we located (and there are probably some we missed¹¹⁴) are: two novels (his only fiction, both based on historical events); three social commentaries (an almost genetically based attack on the behavior of the German

¹¹⁴Various published biographical accounts about CBH, probably based on information he or his family provided, contain statements that while he was in Paris (1893–94), he was a correspondent for the *Washington Star* and the *Detroit Free Press* newspapers. We attempted a partial search of microfilms of the *Star* for 1893–94 (we were unable to locate an available archival source for the *Free Press*), but found this time consuming and unrewarding. Except for major articles, authorship of articles in the *Star* generally were not attributed, or attributed only anonymously (e.g. "correspondent in Paris"), and there is no internal information in those articles that suggests who the authors might have been. There is also mention that CBH contributed to the *New York Buffalo Illustrated Express* (Hornaday, 1899b:451), which was the Sunday edition of the *Buffalo Express*, but we were unable to locate any specific information on the nature of CBH's contributions to that newspaper.

army during WWI; a deploring of the physical decay of historic Monterey, Calif.; and a remarkably prescient discussion of the historically abusive treatment of China by the West and what will result in the future; two explaining and justifying the work of the U.S. Fish Commission; several popular articles describing the habits of interesting fishes; one describing the history, life, and architecture of the Latin Quarter in Paris; and one, a letter, presumably unintended for publication, describing his pursuit of painting desert landscapes. Most of the articles, but neither of the novels, are adorned with his own informative illustrations. In the following discussion we list these publications chronologically, quoting from and commenting on them, and reproducing some of their included illustrations.¹¹⁵

¹¹⁵We were only able to obtain poor quality reproductions of some of the publications, and some of the figures we reproduce suffer accordingly, but we include these figures as evidence of the variety of CBH's productions and his artistic ability.

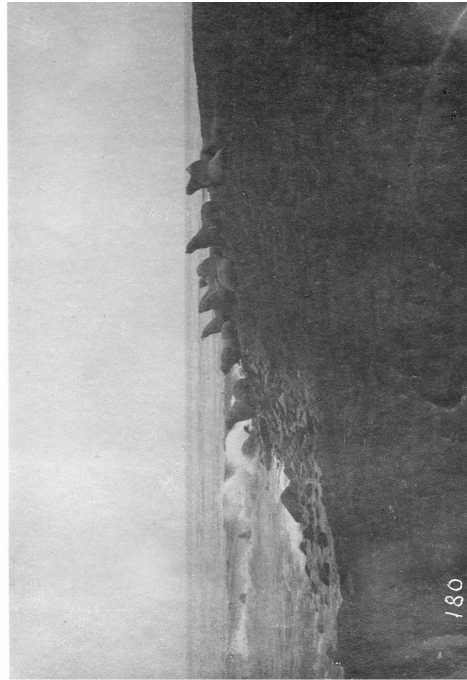
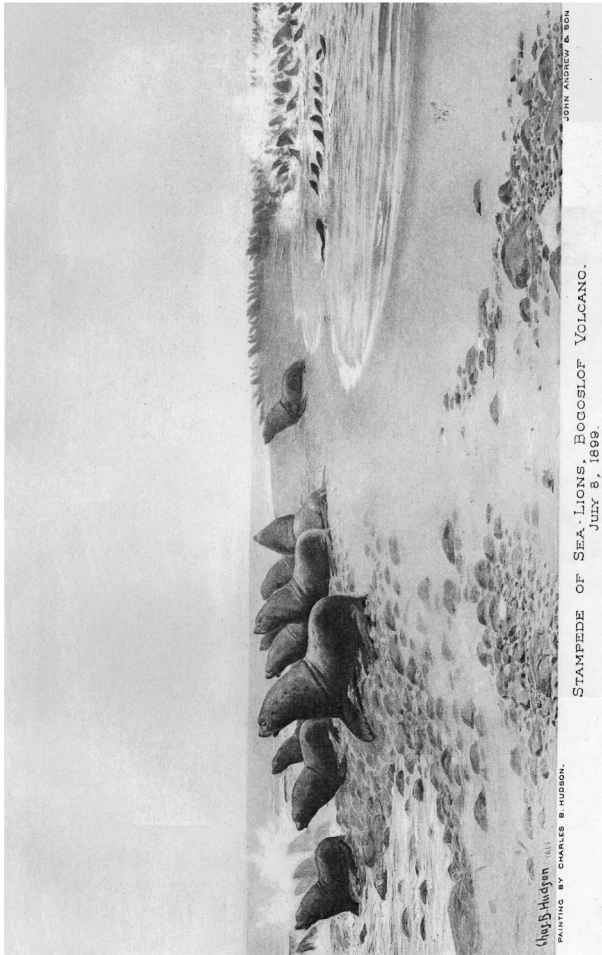


Figure 39.—Stampede of sea lions. Upper left, photogravure of CBH painting (dated 1900), which appeared in Merriam (1902) and was based on the three photographs shown in the other figures. The photographs, taken by Merriam, appeared in Anonymous (N.d., 2:152), which reference comprises two volumes of individually mounted photographic prints, and was limited to very few copies (see note cited in our discussion of Merriam, 1902).

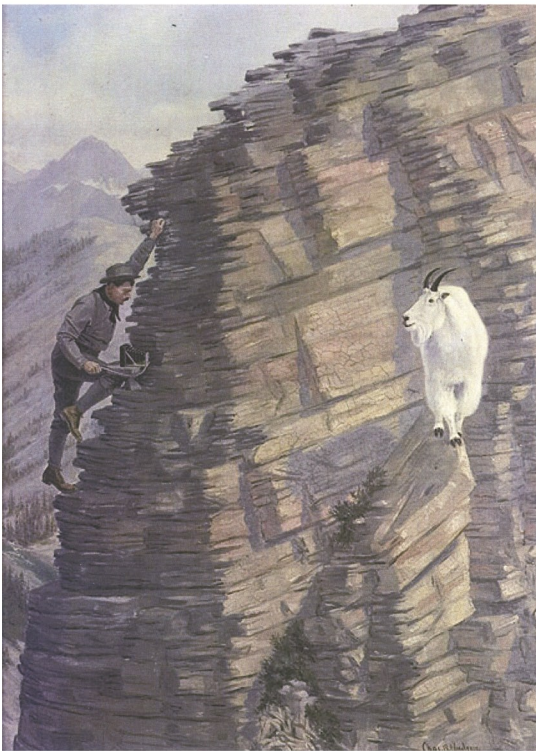
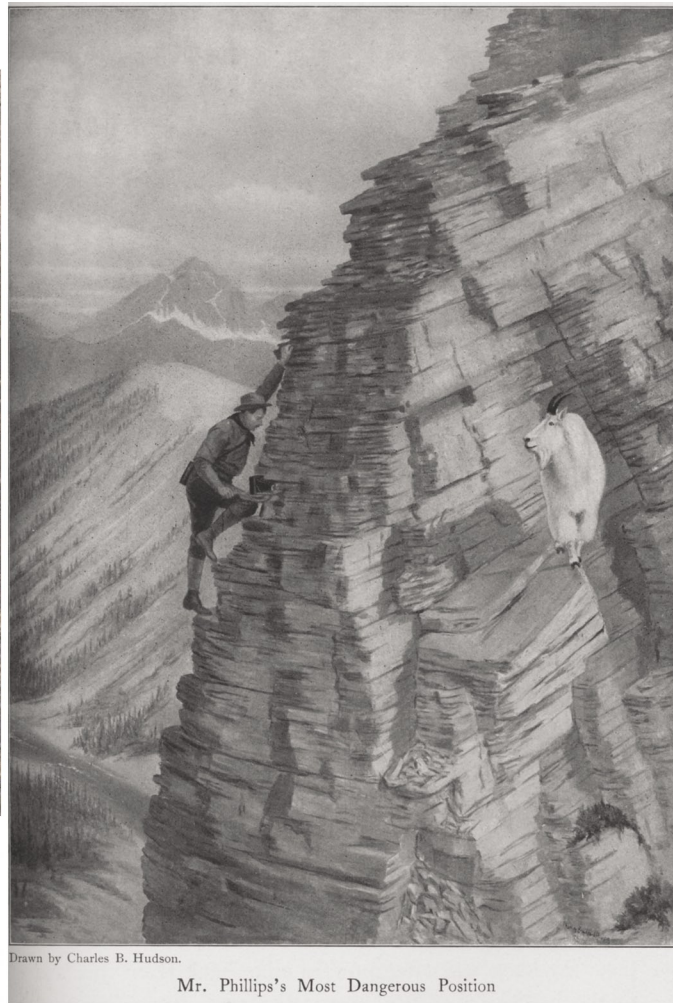


Figure 40.—Left, CBH painting (oil on board, 12×16.75 in, 30.5×42.5 cm), possibly used as study for preparing CBH illustration at right, which appeared in Hornaday (1906). Illustration and details about painting taken from Cowan’s Auctions website, 18 July 2007.



The earliest CBH authored article we found (Hudson, 1893a) was published in May 1893. It was probably written during 1892, the date indicated for all but one or two (undated) of its 11 included illustrations. In the article, CBH describes the methods of model making, the models, and other preparations for the USFC exhibit at the 1893 Chicago World Fair (World’s Columbian Exposition), for which the Commission’s plans began in May 1891.

All of the illustrations are black-and-white drawings and, except for an illustration of the fisheries building, depict models of fishes, ships (including a fourth CBH drawing of the USFC schooner *Grampus*), and the process of model making. We reproduce all the illustrations of the fishes and ships (but

only one of the model making process) in our Figure 43. The illustrations of the fishes are among the first of fishes that CBH executed, as well as published, either for himself or others. CBH was preparing drawings of plans of fishing vessels for the Commission’s exhibit and saw an opportunity, perhaps, to additionally augment his finances. Likening the exhibit and its preparations to an octopus, CBH (1893a:598) extolled:

“The whole continent and the deep seas beyond come within the range of the gigantic tentacles of the Fish Commission Exhibit. Everything that pertains to fish, fishing or fishermen is its prey. Photographs, drawings, clothing and life-size models of fishermen;

photographs, drawings, alcoholic specimens and models of the fish they catch; photographs, drawings, plans, specifications and accurate models of the craft from which they catch them; lines, nets, spears, traps, rods, reels and gear of every description have been brought together into a collection larger and more perfect than any that the world has ever yet beheld.”

CBH (1893b) next published “Curious breadwinners of the deep,” an article about the peculiarities of various fishes, most of which are actually shallow dwelling. It contains 11 line drawings that CBH made in 1892 and 1893, four of which are indicated as having been done in Paris, during the period

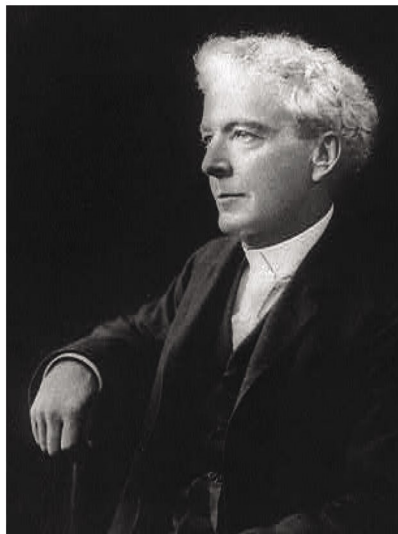


Figure 41.—Luther Burbank and two CBH illustrations made for him in 1909. On left: “Burbank Poppies” from 1914 “Burbank Seed Book.” On right: “Nectarine” from 1982 portfolio, “Artistry with plants.” Photograph from Library of Congress digital file, LCUSZ6-180, also appeared in 1914 catalog.

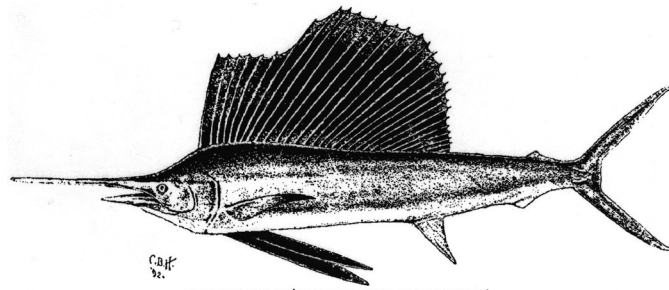


Figure 42.—CBH painting, “Spanish Bay,” Monterey Peninsula, Calif., in collection of Crocker Art Museum, Sacramento, Calif. (from Shields, 2006:229).

when he was studying at the Academie Julian. All of the illustrations depict readily recognizable types of fishes.

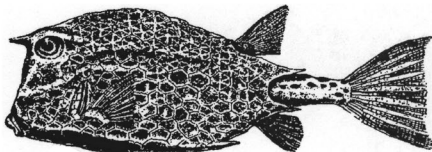
We reproduce four of the illustrations, three representing individual species in habitats (Fig. 44) and one reproducing

a medley of a large number of species representing many different families (Fig. 45).



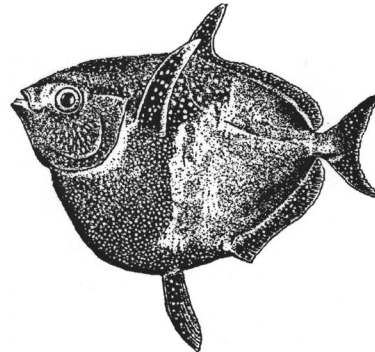
CBH
92.

THE SAILFISH (*ISTIOPHORUS AMERICANUS*).

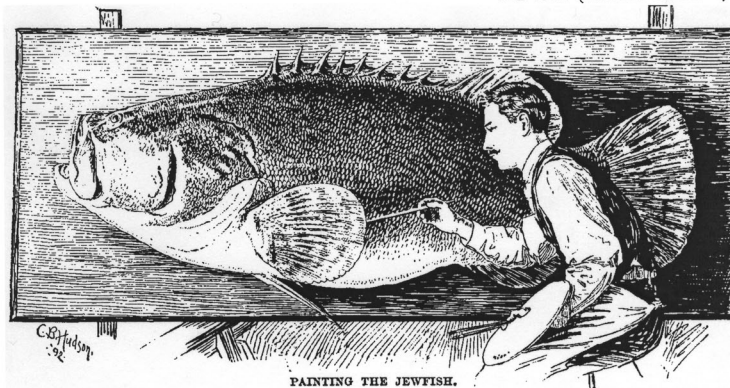


CBH
92.

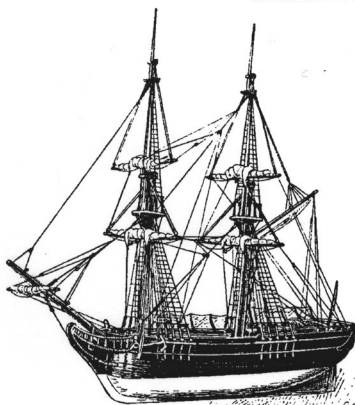
THE TRUNKFISH (*OSTRACION QUADRICORNIS*).



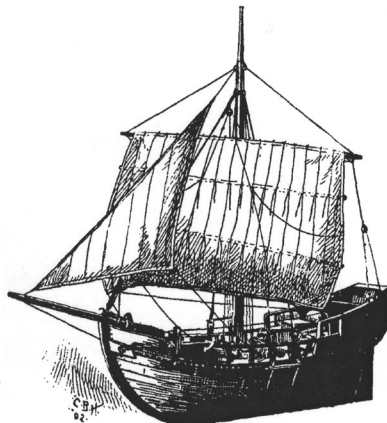
THE OPAH (*LAMPRIS GUTTATUS*).



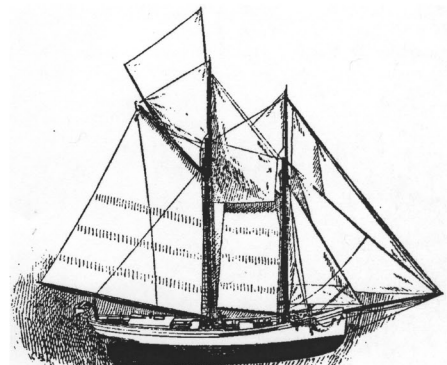
PAINTING THE JEWFISH.



MODEL OF A "SNOW."



MODEL OF THE "SPARROWHAWK."

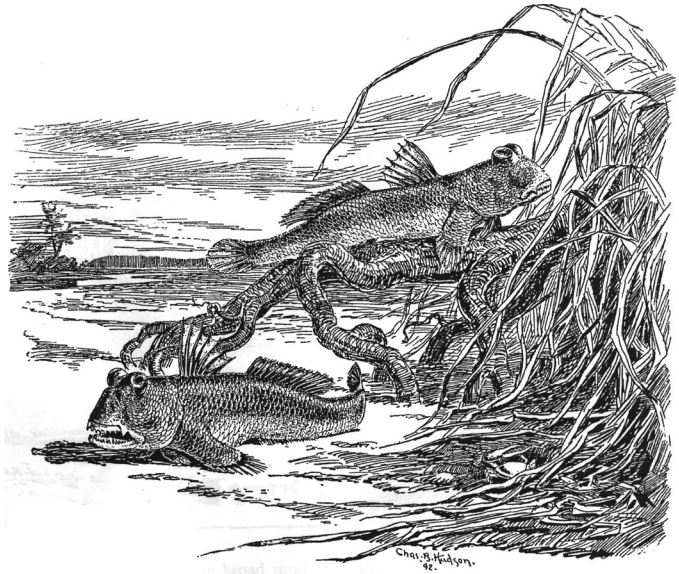


MODEL OF U. S. F. C. SCHOONER "GRAMPUS."

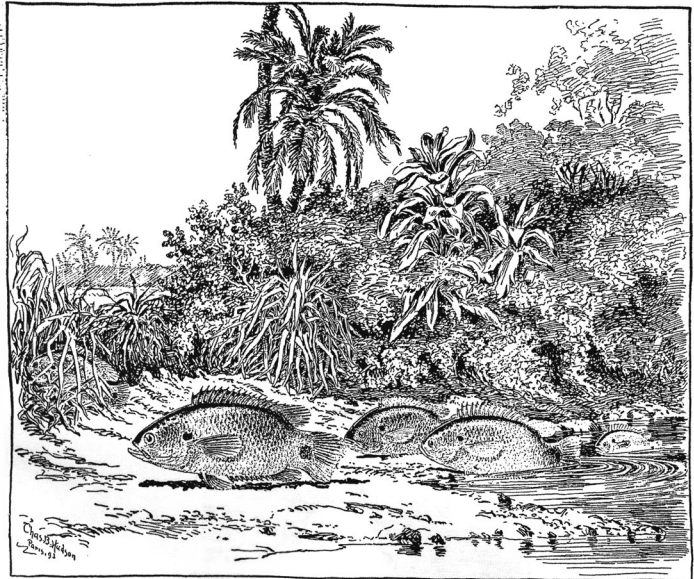
Figure 43.—CBH illustrations, dated 1892 or undated, published in Hudson's (1893) article about the USFC exhibit at the Chicago World's Fair. Illustrations were all based on models. Current scientific name of the sailfish is *Istiophorus platypterus*; trunkfish is now called scrawled cowfish, *Lactophrys quadricornis*; the Jewfish is now known as the Goliath grouper, *Epinephelus itajara*. The *Snow* and *Sparrowhawk* were early English vessels used for fishing on the American coast. The *Grampus* was designed by J. W. Collins for the USFC; the model is No. 298232 in the National Watercraft Collection (Chapelle (1960:224).



THE ARCHER.



Chas. B. Hudson.



CLIMBING PERCH.

Figure 44.—Three CBH illustrations included in Hudson (1893b). Upper left, the archer fish, *Toxotes* sp., in the process of shooting down a butterfly with a squirt of water. Upper right, mudskippers, *Periophthalmus* sp., and lower right, climbing perch, *Anabas* sp., members of two genera of fishes that can respire, if damp, out of water for long periods of time.

His choice of subject was undoubtedly influenced by what he learned from his employment, on salary or contract, as an illustrator for the USFC. The article describes several species of fishes that have unusual behaviors or anatomy. CBH's writing is clear and often reads as if written for a scientific journal, but he also capably infuses his subject with humor, as in his discussion of the rather ugly and voracious anglerfish:

"It is difficult to conceive anything more forbidding and more repulsive than this slimy monster, yet the great French ichthyologist, Lacépède, is at considerable pains to show that it bears no resemblance, in any respect, to a human being, and that its great flabby fins are in no way similar or to be compared with the human hand. This was very good and

thoughtful of Lacépède, for if any unfortunate should chance to detect a fancied resemblance between the angler and himself, he would probably be a prey to considerable uneasiness of mind."

For another species, he quotes from Pliny (1st Century A.D.; elder or younger not indicated), who wrote in Latin and

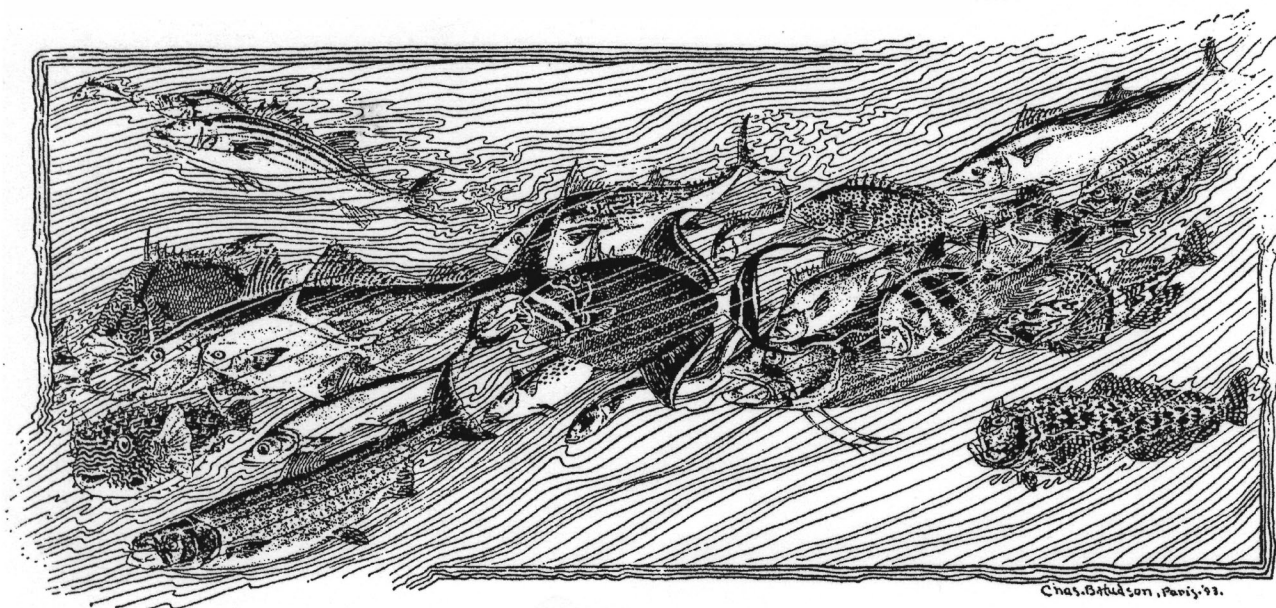


Figure 45.—CBH illustrated medley of fishes representing many different families appeared in Hudson (1893b) and was prepared in Paris during the time he was attending classes at the Academie Julian.

which CBH appears to have translated into English.

From late 1893 to early 1894, CBH was in Paris studying with William A. Bouguereau¹¹⁶ at the Academie Julian, a prominent art school located in the Latin Quarter.¹¹⁷ In 1894 he was joined in Paris by his wife and young daughter. Apparently, he had time not only to write and illustrate fishes for his “Curious Breadwinners” article, but he also produced etchings¹¹⁸ and pen-and-ink drawings of Paris scenes. In April, 1894, CBH (1894) published

¹¹⁶Also known as Adolphe William Bouguereau or William A. Bouguereau, 1825–1905; well known for his realistic paintings, particularly those of women.

¹¹⁷During part or all of his visit, he was joined by his first wife and their daughter Christine (VGS interview, Christine Hudson Kempton, Annapolis, Md., 3 May 1985).

¹¹⁸Two impressions of the same CBH etching, “Pont de Bercy, Paris,” 1894, which CBH gifted to the Museum of Fine Arts, Boston, in 1898 (S. L. Stepanek, MFA, Boston, emails, 26–27 Sept. 2007), are the only CBH etchings of which we are aware that exist in a public collection. The foreground of the etching shows a barge tied to a quay, with a bridge and buildings faintly indicated in the distant background. Our general impression of the etching is that it is quite rough, perhaps experimental, and suffers greatly in comparison with other works by CBH.

“The Latin Quarter.” The article is a historical, physical, and sociological description of that famous section of Paris and includes 12 line drawings and one halftone illustration, all signed and dated “93, Paris” (possibly without CBH’s permission, the editor inserted a full-page halftone illustration by another artist in the article). CBH’s excellent illustrations depict the activities and dress of the people in the Quarter: walking, conversing, carrying bread, and reading at bookstalls, all including portions of the architecture of the Quarter or scenes of the Seine (Fig. 46).¹¹⁹

The text is lively, historically informative, and descriptively detailed as the following three excerpts demonstrate (*italics in original*).

¹¹⁹Butterworth (1897) reproduced five of CBH’s illustrations from this publication, one of which, “Rue Galande,” we also reproduce in Figure 46. Butterworth, however, replaced the figure’s legend with “A Glimpse of Poorer Paris,” in keeping with the nature of his article, which was about charitable organizations in Paris that service its homeless and destitute thousands. One wonders if CBH was aware that Butterworth would use his illustrations for an article that dwelt on the other side of the happy life that CBH had so enthusiastically described.

“If there was ever a youth, a student, to whom the name of the Latin Quarter was not an inspiration of longing, in whose breast it failed to rouse an alluring dream of classic learning and Bohemian liberty, of time-honored schools and glittering *cafés*, or erudite professors and dazzling *grisettes* [lively young women], of study, gayety and tumult, he could not have been well constituted.” (p. 385)

“As [the Church of St. Julien le Pauvre] stands at present, the edifice dates from the twelfth century, and marks the transition from the Roman to the Gothic order. Of the original structure some portions only remain, having been destroyed in 886 by marauding Normans, and rebuilt in its present form. During the great intellectual movement which commenced about 1000, following the Crusades and the Norman conquests of Italy, Sicily and Greece, it became the centre round which gathered a community of men of letters.” (p. 387–388).

“Any Parisian boulevard is interesting, but St. Michel has a quality

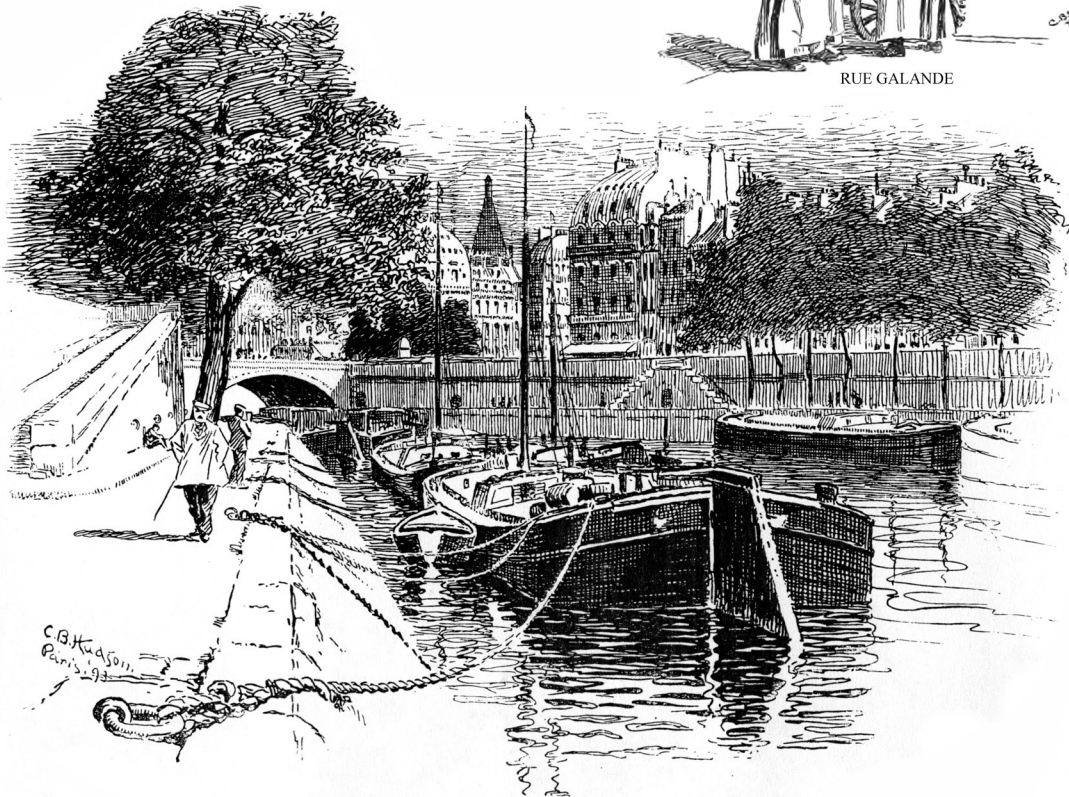
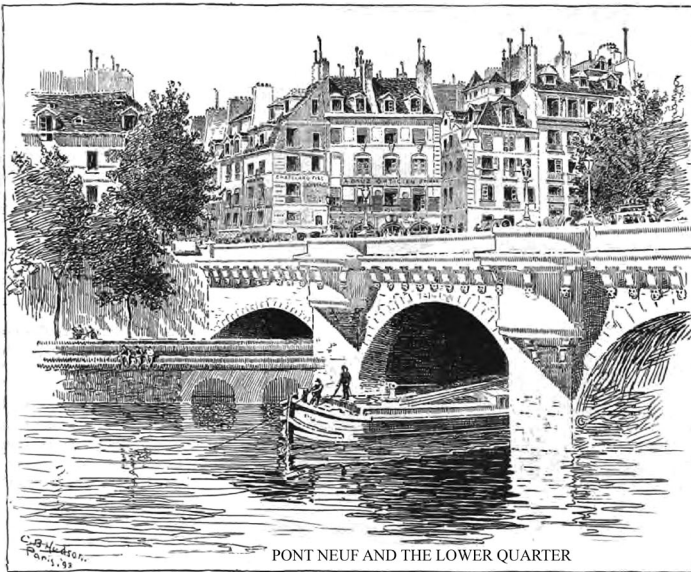


Figure 46.—Three of 13 illustrations CBH made in 1893 for his 1894 article, “The Latin Quarter.” All were done in Paris during his period of study at the Academie Julian. Upper right area of upper right figure was filled with text.



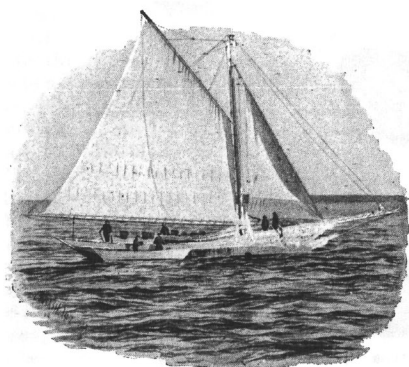
Figure 47.—Two CBH 1894 illustrations appearing in his 1895a article, “Finny protégés of Uncle Sam.”

SHAD-HATCHING STATION AT HAVRE DE GRACE.



SEINING FOR SHAD ON THE POTOMAC RIVER

of interest which is paralleled nowhere in the world, due, of course, to the presence of those ineffable creatures, the students, who throng here in droves and multitudes, loquacious, gay and unrestrained. But night is the time to see the Boul Mich, and not earlier than eleven o'clock. Then the student is



BOARDING A FISHING SMACK IN QUEST OF EGGS.



EXAMINING BROOK TROUT.

Figure 48.—Three CBH 1894 illustrations appearing in his 1895a article “Finny protégés of Uncle Sam.” Top figure is first word (To) of article.

free and awake, and the *cafés* are crowded with a restless, singing, shouting, turbulent mob which would drive insane any landlord save him bred to the Boulevard St. Michel.” (p. 394)

CBH (1895a) returned to the sea, and published “Finny Protégés of Uncle Sam.” It contains 13 of his mostly gray-scale drawings, probably much reduced from their original size, all dated 1894, except for the undated initial letter T at the beginning of the article (Fig. 47, 48). In the article, CBH had two serious purposes. The first was to impress the reader with the contribution of the USFC to the nation’s economy. To do this, he explains at length the value and success of the Commission’s project to restock shad in the Potomac River where they had become depleted.

His second purpose was to explain in detail the procedures for artificially propagating fishes and the great amount of effort involved in doing so. Finally, he ends by noting how successful these efforts have been at introducing shad and striped bass, which are native to eastern American waters, into the waters of the western states.¹²⁰ It is possible that someone in the Fish Commission may have suggested the topic of this article to CBH, as he had the Commission’s cooperation. Tarleton H. Bean¹²¹ (1896:36) wrote, “In the spring of 1894 . . . Illustrations and explanations of the methods of the [U. S. Fish] Commission were also furnished to Mr. C. B. Hudson.”

A review of the article (Anonymous, 1895:165) concluded, “Mr. Hudson brings the process before our very eyes, and we find his article as interesting

¹²⁰Both the American shad, *Alosa sapidissima* (Wilson), and striped bass, *Morone saxatilis* (Walbaum), are desirable food fishes, native to the eastern United States. The bass is, additionally, a favorite gamefish, and both species are still present in some of the areas in which they were introduced. The introduction of fishes into areas in which they are not native is generally considered unacceptable today. The consequences of such introductions are unpredictable and can be destructive to the point of annihilation for the native fishes or other native organisms.

¹²¹Bean (8 Oct. 1846–28 Dec. 1916), from 1892 to 1894, was Assistant-in-charge, Division of Fish Culture, U.S. Fish Commission (Anonymous, 1935).

from an artistic standpoint as it is a valuable chapter in natural history.”

Continuing his interest in fishes, CBH (1895c) published “In the realm of the wonderful.” It contains 10 of his ink drawings (all either undated or dated 1895) of fishes. It more or less follows his 1893b “Breadwinners” article in describing the peculiar abilities and behaviors of selected fishes.¹²² One of the drawings (Fig. 49), showing sea-horses and pipefishes, entwined among sea grasses at the bottom and swirling upward and diminishing in size along an apparent water current, is particularly delightful. CBH’s literacy and humor pervades the article, including a drawing (Fig. 49) in which three different bizarre, but identifiable, deep-sea fishes with widely open toothy mouths are converging from different directions on one small hapless prey fish. The legend of this illustration reads, “A Basalian¹²³ Tragedy.” The tail of a whole ingested prey fish, can be seen through the distended belly of the ceratioid anglerfish at the lower left in the figure. We suspect that William Beebe (1934), of bathysphere fame, borrowed the idea for his plate 9 and its caption (“A deep-sea tragedy drama—in three acts!”) from CBH’s article.

CBH ends this article with a bit of pedantry: “But I believe, I declare that the reader’s credulity has met a strain. And I fear that if he accepts all these statements—which, I assure him, are worth[y]—he will be ready to exclaim with Sebastian, in ‘The Tempest,’

A living drollery!¹²⁴ [Now] I will believe
That there are unicorns; that in Arabia
There is but one tree, the phoenix’ throne;
one phoenix
At this hour reigning there.”

¹²²Four of the illustrations appear on a large colorful poster (our Figure 49), which was probably intended for magazine and newspaper kiosks, advertising the magazine issue. Attractive digitally reproduced copies of the poster, in color, are available for purchase from the New York Public Library.

¹²³An obsolete word meaning abyssal.

¹²⁴*Tempest* (III, iii, 21); drollery meant a puppet show in Shakespeare’s day; usage now obsolete.

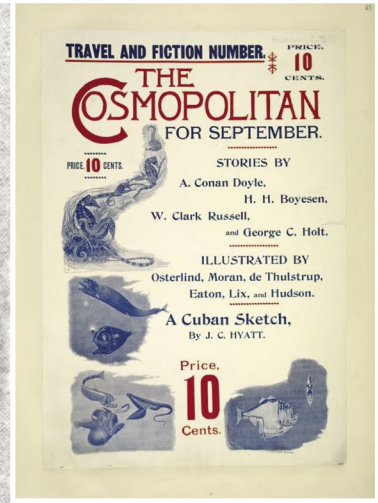
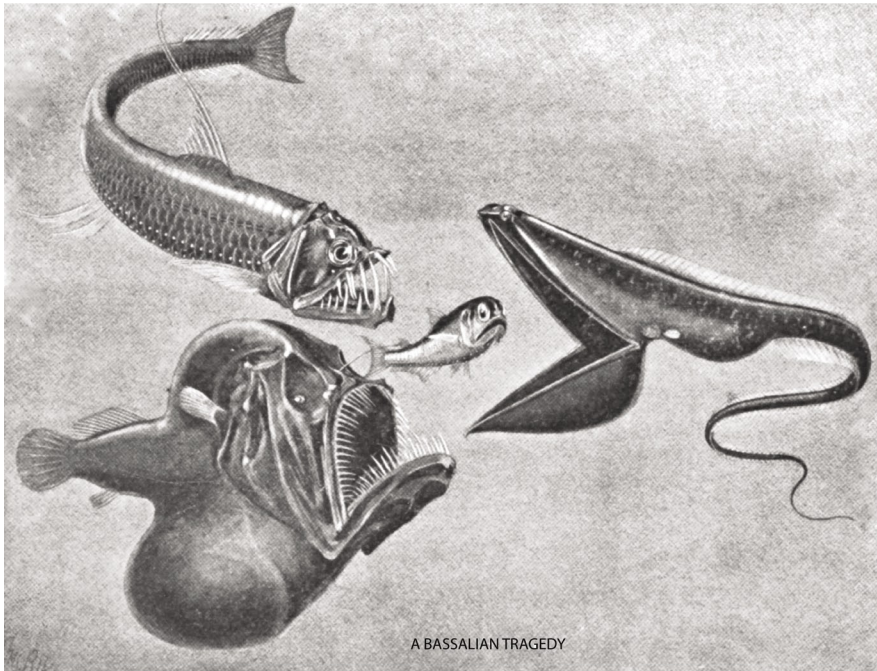
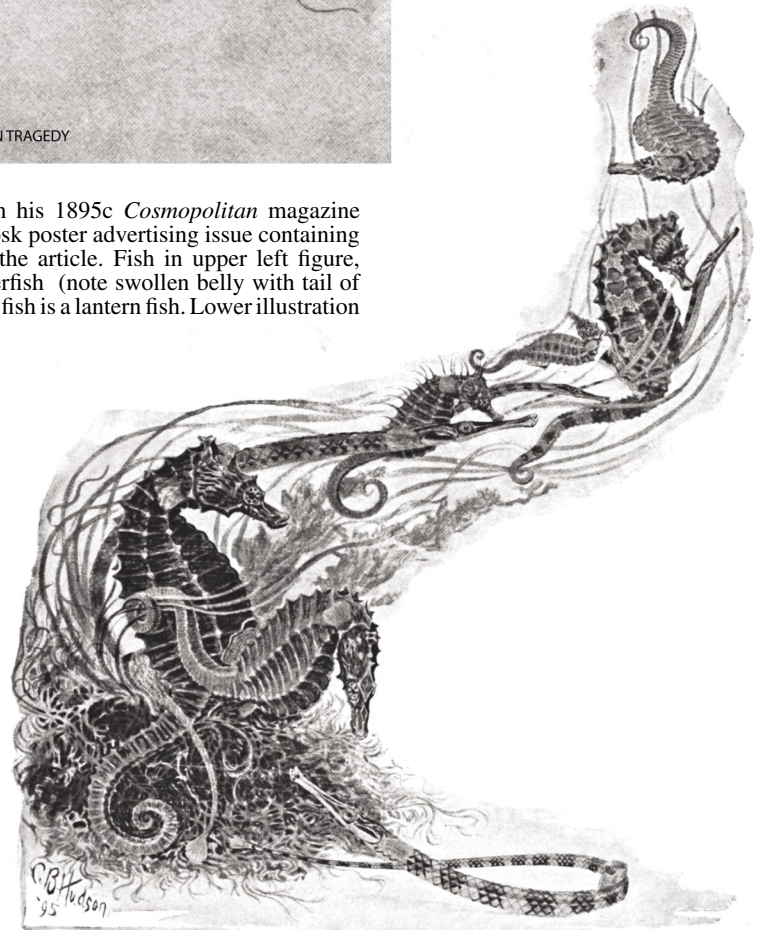


Figure 49.—Two 1895 CBH illustrations from his 1895c *Cosmopolitan* magazine article, “In the Realm of the Wonderful” and kiosk poster advertising issue containing his article, reproducing four of ten figures in the article. Fish in upper left figure, clockwise: viperfish; gulper eel; ceratioid anglerfish (note swollen belly with tail of injected fish showing through); threatened center fish is a lantern fish. Lower illustration includes sea horses and pipefishes.

CBH (1895b) continued to draw on his knowledge of fishes in a short article for the children’s magazine, *St. Nicholas*, entitled, “A real air-castle.” The article contains only 500 words and mainly describes the breeding behavior of the paradise fish, *Macropodus opercularis*; (CBH used a junior synonym, *Macropodus viridi-aurata*, which was believed to be the correct name at the time he wrote). The species builds bubble nests for its young (hence, a real air castle). Accompanying the article is a single CBH illustration¹²⁵ (Fig. 50) depicting a habitat slice with two accurately illustrated paradise fish, one of which is adding bubbles to a bubble nest at the water’s surface. CBH also mentioned the fighting fish, *Betta pugnax*, and the tree climbing perch, *Anabas testudineus*, in the article, which is written with a slightly



humorous twist; he closes with a statement similar in context to that of the previously discussed article, “... this is getting to sound like a regular fish story ... [but] Every word is true,

though, however much they may sound like yarns.”

With the exception of a biographical sketch of his father, and preface, dated 1 Feb. 1904, Detroit, Mich., which are

¹²⁵The original painting of this illustration appeared in an eBay auction in Mar. 2008, and sold for \$198.

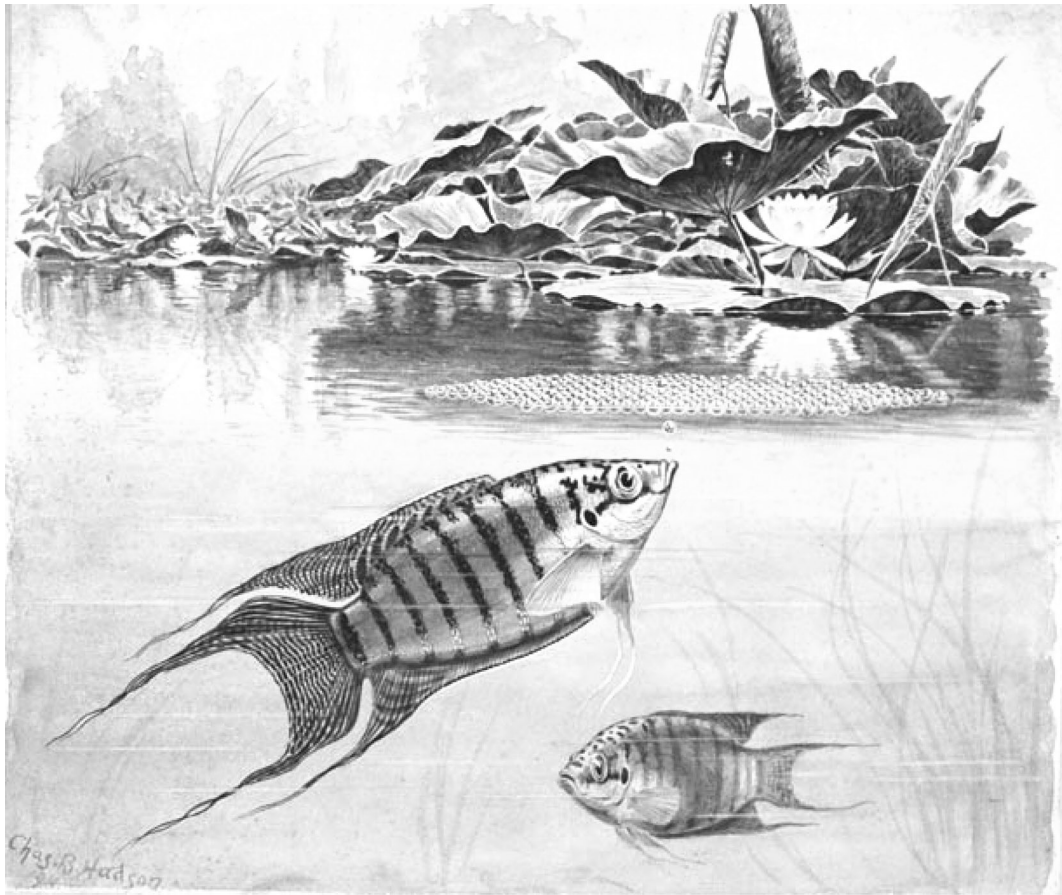


Figure 50.—1894 CBH illustration used in his 1895b article, “A real air-castle.” Air castle refers to the bubble nest that the male paradise fish builds to hold its fertilized eggs and developing young.

included in his father’s, T. J. Hudson (1904) posthumous book, “The Evolution of the Soul,” CBH (1904), appears to have ceased publishing his own articles from 1896 until 1907. This was an extremely busy and stressful period which included much travel, illustrating fishes and other subjects for the USFC, general illustrating for books and magazine articles by other authors, military service during the Spanish–American war, separation and a divorce from his first wife, a move from Washington, D.C., to Pacific Grove, Calif., a second marriage, supporting a wife and two children, and taking care of his sick father in Detroit.

In addition to the biographical sketch and preface (and possibly the included lithograph of his father’s profile), CBH was called upon to edit his father’s 1904

book. In the preface, CBH attempted to explain and defend his father’s explanations of psychic phenomena and philosophy of the “duality of the human mental organization . . . He made no effort to protect his theories from assault by surrounding them with a haze of metaphysics, metaphor, or phrases in the subjunctive. He opened his front to attack, and threw down the gage [obsolete; = glove (or gauntlet?).]” CBH was an able wordsmith!

In 1907a, CBH, who is indicated as residing in Detroit, Mich., published “The Chinaman and the Foreign Devils.” The use of “Chinaman” rather than “Chinese” was socially acceptable at that time. This article appears to be the first of only two (see Hudson, 1917) seriously political articles published by CBH. In it, CBH succinctly describes

the long history of “outrageous” and imperialistic actions imposed by western nations on a historically peaceful China. As a result, the Chinese established a military school in a former library in Peking. CBH remarked prophetically, “The right [of the Chinaman] to recognition of his objection [to the abuses by the western nations] is, of course not to be considered by any power, because he is not yet strong enough to enforce it. There are indications that some day he may be.”

On 6 Oct. 1907, CBH (1907b) published “The Crimson Conquest, A Romance of Pizarro and Peru”¹²⁶, using the

¹²⁶The month-day date is taken from newspaper advertisements indicating “Ready To-Day.” The book advertisements also note that the colorful and “striking” book cover and frontispiece are

continued on next page

same publisher as that of his father's last book. "The Crimson Conquest" is a love story between a Spanish captain and an Inca princess set amidst Pizarro's bloody conquest of the Incas. Surprisingly, the elaborately colored book cover and only included illustration, the frontispiece, are not by CBH, but by J. C. Leyendecker, a prominent illustrator. The book is well written, but received usually short and mixed reviews. Although CBH was 42 when it was published, one reviewer¹²⁷ described him as "a young author . . . a scholar," and the book as set forth with "considerable eloquence . . ." Another reviewer¹²⁸, however, concluded, "Indeed there is not a bit of harm in the book, except that it is very long and strikes us as being very dull." In general, however, reviews were short and complimentary. The most extensive review¹²⁹ included a black-and-white reproduction of Leyendecker's frontispiece, a detailed recounting of the story, and a statement that "the story is well written and very readable."¹³⁰

To impart a historical atmosphere, CBH used words such as thee, thou, and hath in quoted conversations. He continued this style even more generously in his other novel, "The Royal Outlaw" (see below), published 10 years after his first novel.

The period between 1907 and 1915 was another busy one in CBH's life, including the birth of a daughter, Claire, and the construction of a home (both

1910). Additionally, during this time, the household included his son Bradford, born in 1906, and Lester, now a teenager, the son of his first marriage.

CBH (1915) published and illustrated (based on dry-point etchings) an article titled "Monterey on the Etching Plate." The piece is deeply sentimental, invoking and lamenting the lost past of the Monterey area and the deterioration of its historic buildings, at the same time bemoaning those of recent construction. The *San Jose Mercury Herald* (15 Aug. 1915) carried a highly appreciative and complimentary review of Hudson's article by Amanda M. Miller (1915). The review reproduced two of the five CBH illustrations that accompanied the original article. About half of the review describes the subjects of CBH's artistic (or interpretive) paintings, which apparently remained the same the rest of his life. That portion of the review is worthy of repeating here as we can do no better (it emphasizes, as well, his fixation with the sea):

"Mr. Hudson is an artist whose canvases have already received attention and recognition because of their strong, vigorous and artistic handling, as well as their splendid technique. Many—nay, most—of Mr. Hudson's paintings are scenes along the Monterey coast—sea-scapes, in sunshine and shadow, in calm and storm; rugged rock-strewn shores smothered in a swelter of breakers, and long stretches of gleaming sands with slipping, foam-capped tides creeping in undulating line across its shifting surface, while away on the horizon the level sun sends shafts of golden light in a shimmering pathway across the unquiet water; landscapes depicting white sand dunes adrift about a dwarfed and misshapen shrub, or cool, peaceful woods where sentry-like, the giant sequoias uprear their tall heads while sunshine filters in a golden shower between their drooping branches and, through the purple-hazed vista, one glimpses the rugged mountains beyond."

George Oliver Shields¹³¹, staunch conservationist, founder and editor of *Recreation* magazine, for which CBH had illustrated, submitted a letter he received from CBH (1916) to the *New York Times*, in which it was published on 18 June 1916 (page E2, column 6). CBH was on a desert sketching trip preparing for a diorama background scene he would paint for the California Academy of Sciences. Although lengthy, we reproduce it in its entirety because it exemplifies CBH's deep feeling for the scenes he painted, his ability to creatively describe what he saw and experienced, as well as to inject a little levity in his seriousness.

Berkeley, Cal., June 7, 1916

Dear Shields: Am just home from the desert—the sure enough desert, near Salton Sea, back some twenty-six miles in the coppery hills; dried up, arid, shimmering hills—and wish I were there again, with no houses, no jitneys, no electric cars, and no yahoos to contemplate. Nothing worse than lizards and rattlesnakes, with appropriate cactus, yucca, sand, and rocks.

The handiwork of God sure does lay over the handiwork of man. In the desert you feel, somehow, that you are looking on the handiwork of God straight from His factory and without any modern improvements.

No wonder the Arab and the old-time Hebrew developed a theology. In Riverside County, Cal., there is an atmosphere of theology, hazy, maybe, like the distance; yet borne in on you by the wind that makes no noise; by the mountains that never budge and remind you forcibly that they do not budge, nor have ever done so, nor ever shall. They wear no trees, no shrubbery or grass or any kind of trimmings to

¹²⁶(continued) by J. C. Leyendecker (1874–1951), a prominent artist and illustrator whose colorful illustrations graced the covers of *The Saturday Evening Post* and appeared in many advertisements and magazines. Leyendecker is reported to have illustrated only seven book covers. An informative web site devoted to him is: <http://www.bpib.com/illustrat/leyendec.htm>.

¹²⁷Anonymous. *The American Review of Reviews*, vol. 37, p. 122, 1908.

¹²⁸Anonymous, *New York Times* (26 Oct. 1907, p. BR678)

¹²⁹*The Inter Ocean*, a now extinct Chicago newspaper, 28 Sept. 1907, page number not available. Copy of article received courtesy of CHB.

¹³⁰An extract entitled "The Golden Ransom," from Chapter 10 of "The Crimson Conquest," was published under CBH's name, as pages 296–301 in E. M. Tappan (Editor), "The World's Story: a History of the World in Story, Song and Art," vol. 11, 1914, Houghton Mifflin Co., Boston and New York.

¹³¹26 Aug. 1846–11 Nov. 1925. Editor and owner of the magazine *Recreation*, which published articles by W. T. Hornaday that were illustrated by CBH. The three men were good friends and mutual admirers. (Detailed biography in Malone (1935:106)

suggest growth, decay, and change; only the scars of erosion, ancient and slow beyond conception. You get an idea of permanence as nowhere else; and yet, also, a whisper that you are only 6 feet high or less [CBH was 5 ft 5½ in tall], weigh something under 200 pounds, have a contemptible power of locomotion on your hind legs, and an allotment of life that might amount to one-twentieth of a second.

There is a chastening influence in the desert, an influence that lifts the sane; and yet you walk a mile, you look around, and wish you had a bottle of beer. You walk another mile and wish you had a barrel of beer. Presently you can look on the barren peaks and sweeping, stupendous slopes and fancy how hostile and diabolical they might seem to a man if there were no beer anywhere, nor even water, nor even ginger pop. Impressive, the desert!

We [I?] came to a canyon, and up some 2,600 feet a spring, flowing crystal-clear, luke-warm water. Cottonwood trees about, and birds and butterflies, and frogs that must be the descendants of frogs that dwelt there a million years ago, before the desert uncrouched¹³²: for a modern frog that could hop across the intervening hot sand from the nearest puddle would deserve mention in the sporting section, and bring his missus and the kids? He couldn't do it. They are old-timers. Have an evensong, too; musical beyond compare, and different from any other frogs.

Gold there, too. Panned out a color myself. And bees. Old prospector drifted in and gathered honey. Gave us some wild honey. And rattlesnakes! Same old prospector, reclining against his tent roll, heard rustle at his elbow, arose and killed a big rattler. Killed one myself, out on the plain, and

¹³²We were unable to find a definition for this word. Crouched means laying low, and CBH could possibly have meant uncrouched to indicate "before mountains arose in the desert."

wished the next moment I hadn't. Wish so now fervently. He showed no fight, tried to get away, and probably never would have met another man. And he belonged there, and I didn't. He wanted to go about his own business, and I should have gone about mine. Tried to hide his poor old head. Dammit! If he was pizen, he wasn't as pizen as the average man. Wish it had been an average man instead. I don't kill snakes, nor yet average men, if that's a virtue.

But, oh, Shields, avick¹³³, the color! The delicacy and subtlety of tints and shades in those huge masses of rock and boundless levels! Brilliant, too, in the sunlight, yet always delicate. Paint! Paint is mud. The painter, a futile lump of mud. And when you sit down out in the middle of the waste and try to paint what you see and hear the ticking of your watch in the desert's silence, you want to cry. It pretty nearly makes me cry even to recall it—the beauty, the majesty, the sense of eternity of time and space. For the sky is bigger there than anywhere else, and deeper, and bluer; and the mountains seem everlasting.

You paint with enthusiasm, with élan. You get up to see what you've done and back into a cactus—invariably. The cactus is there, or if it isn't there, it gets there. Curious circumstances, and always of interest to the painter, however callous and sophisticated (Fig. 51).

CBH (1917) published his second, historical, novel, "The Royal Outlaw."¹³⁴ It has a Biblical setting and concerns the

¹³³The only definition we could find for this word was on an obscure website that indicated that it was a "hidden French word for dope." This certainly was not CBH's meaning. It seems likely that this was an exclamation that was meant for general emphasis of what followed.

¹³⁴Unlike "The Crimson Conquest," which had an illustrated cover and frontispiece, "The Royal Outlaw" contained neither, but it contained a dedication, which his first novel did not. It was dedicated, "affectionately," but without other explanation, to Mary Betts Barnhigel [Barnhigel?], possibly CBH's sister-in-law.

strained dynamic between David and King Saul. CBH included many people, places, and battles mentioned in the Old Testament.

We found two reviews, both very positive and both noting CBH's originality in choosing the Bible as a basis for his plot, and adhering very closely to its text. The first review¹³⁵ described the book as a

"... stirring tale, worked out with skill and vigor and imagination . . . Mr. Hudson has merely taken the Bible down from the shelf where the present generation is prone to leave it untouched and woven out the tale of David . . . a story so breathless, so romantic, so full of all the elements that make for fascination in adventure that at once one wonders why no one ever thought of doing it before . . . Historically it is accurate in all of its main features . . . his picture stays in its frame [and] is recognizable as belonging to its time and place . . . Humor enlivens the pages . . . It is a good story, well told, and those who like a tale of adventure will hardly find a better among recent novels."

The second review¹³⁶ starts by considering it "... a surprising pleasure . . . the most daring novel of this season, or many seasons. Not in the sensual, furtively sexual, or blatantly sexed style to which . . . the word 'daring' is applied by every maidenly reviewer to any book that shocks her . . . But . . . is really daring [because] it is founded on biblical narrative . . ." The review ends, "It is wholly lacking in 'piety' and no piety is needed here . . . the author has realized as well as any who read that the period was one of rude pastoral kings and nomadic chiefs, when war and plunder were the sport and work of men."

With no intent to detract from these two reviews, we note one remark that

¹³⁵*New York Times*, 15 July 1917, p. 60. (aided by ProQuest Historic Newspapers).

¹³⁶*Los Angeles Times*, 26 Aug. 1917, page III, 12, "conducted" by G. B. Young. (aided by ProQuest Historic Newspapers).



Figure 51.—CBH paintings of Mohave Desert (indicated by Joshua trees), oil on canvas (sizes not provided); probably done from sketches and studies during CBH’s 1916 desert trip (see text). Unfinished correction area faintly visible around Joshua tree in lower painting. (Collection and courtesy of the late Claire Hudson Brett; lower © Jim Patton, 1986).

appears to indicate an ethnic prejudice, common in CBH’s day. On page 7, in describing David’s physical appearance, CBH asserts, “The typical Hebrew characteristics of feature were wanting, as racial traits are always wanting in the highest specimens of whatever blood. He [David] looked rather a ruddy Greek than a Jew ...” One wonders how it escaped someone as highly intelligent as CBH, that it would be difficult, if not impossible, to apply this observation, for

example, to the “highest specimens” of the natives of China or west Africa.

CBH’s second editorial, a full-page article headlined, “Persistence of Teuton’s Traits from Caesar’s Time,” appeared in the *New York Times* for 17 Mar. 1918. The United States had been at war with Germany since 6 Apr. 1917, and in what would be an “op-ed” in today’s newspapers, CBH penned an attack on the German people that appears to indicate he believed that there is a genetic

component in the personality of tribes or nations of peoples. The article surrounds a large reproduction of a painting, done by a German artist, of and by order of, Wilhelm II (1859–1941), last Emperor [Kaiser] of Germany and King of Prussia. Wilhelm is “Shown in the Garb of an Ancient Conqueror, Indicating His Predilection for the War Methods of His Progenitors.” The article evidences CBH’s knowledge of early European history and is very well written. He

begins by describing the inhumanity of the proto-Germanic Suebi peoples from before Caesar's time and progresses to the present. We quote here the complete last paragraph of the article:

“Thus we find, in the primitive Teuton, the attributes which have united a horrified and exasperated world against him in this present struggle. If the descendant has altered in any essential particular from the “Blond Beast”¹³⁷, who went about in skins, the difference is not distinguishable. And this is the people against whom we are making war. It is pleasant, and possibly commendable, to indulge in the platitude that we war only upon the military autocracy, the Kaiser, his Tirpitzes, his Bissings, his Hindenburgs¹³⁸, and other unspeakables, and that we love the German people. We might be privileged to enjoy at least this

¹³⁷Following is from: www.thirdworldtraveler.com/Genocide/SplendidBlondeBeast.html, indicated as excerpted from a book by Christopher Simpson, “The Splendid Blond Beast: Money, Law and Genocide in the Twentieth Century” (ISBN: 1567510620), Common Courage Press, 1995, 399 p. [original not examined]: “Friedrich Nietzsche called the aristocratic predators who write society's laws ‘the splendid blond beast’ precisely because they so often behave as though they are beyond the reach of elementary morality. As he saw things, these elites have cut a path toward a certain sort of excellence consisting mainly of the exercise of power at the expense of others. When dealing with ordinary people, he said, they ‘revert to the innocence of wild animals. . . . We can imagine them returning from an orgy of murder, arson, rape and torture, jubilant and at peace with themselves as though they had committed a fraternity prank—convinced, moreover, that the poets for a long time to come will have something to sing about and to praise.’ Their brutality was true courage, Nietzsche thought, and the foundation of social order.”

¹³⁸Alfred von Tirpitz (1849–1930), German Grand Admiral responsible for policy of unrestricted submarine warfare. Moritz Ferdinand Freiherr von Bissing (1844–1917), Prussian General, governor of occupied Belgium, long believed to have been responsible for deporting Belgians to Germany to be used as forced labor, but he may not have been responsible for this policy. Paul von Hindenburg (1847–1934), often successful military strategist, but ultimately battle losing supreme commander of the German armies during World War I. In 1925, Hindenburg was elected second President of the Weimar Republic, and was reelected in 1932 (defeating Adolf Hitler, whom he unfortunately named chancellor of Germany) and served until his death in 1934 (various sources).

smug satisfaction had we a shred of evidence that a single atrocity in this war has failed to receive the full endorsement of that people as a whole.”

A week later, the *New York Times* (24 Mar. 1918, p. X5) published a lengthy letter to the editor by J. J. Crawford, supporting and elaborating on CBH's thesis. One of us (VGS) clearly remembers frequently hearing similar expressions concerning the genetic character of Germans during and after World War II. CBH was only partly correct in his indictments of the particular Germans he mentions, but this subject is not relevant to our report. We mention it only for its interest with regard to CBH.

The March 1918 article is the last publication that CBH authored, and his 1915 article, “Monterey on the Etching Plate,” is the last article, his own or those of others, for which he specifically prepared the illustrations. Henceforth, CBH would devote his creative efforts to preparing the backgrounds for the dioramas at the California Academy of Sciences and his landscapes and seascapes.

CBH's Fish Specimens

On those trips that CBH made alone in order to illustrate fishes for the USFC and USBF, he was requested to retain and tag specimens he collected and illustrated. The specimens he collected and retained were deposited in the collection of the USFC. For the most part, we do not know what happened to the specimens, although a few were transferred to USNM. The USNM collections have 13 specimens that are indicated as having been collected by CBH. We have been unable to determine with certainty if any of these were used during the preparation of his illustrations, but he did not prepare an illustration of at least one of the specimens, USNM 125386, *Antennarius ocellatus*, an anglerfish, which indicates that he did not always illustrate every specimen or species he collected. Only general localities are associated with the USNM specimens: two (the anglerfish and *Caraxnx hippos*, USNM 169929), are indicated as Atlantic, and 11 (one as *Salvelinus alpinus*, USNM

61732, and ten as *Salmo salar sebago*, USNM 61750, 61753, 61755, 61758, 61779–61783) have the locality given as “North America.”

A Final Small Sample of CBH's Paintings

Before proceeding to a listing and discussion of CBH's ichthyological illustrations, we present a small group of his seascape and landscape paintings (Fig. 52) in addition to the few presented earlier (Fig. 12, 13, 18, 19, 51).

CBH's Ichthyological Illustrations

Aside from his illustrations of fishes for popular magazine articles, it appears that CBH completed a total of 158 scientific illustrations of fishes. Of these, 78 are in black and white or gray-scale and 80 are in color. The original artwork of 151 of the illustrations is present in the USNM illustration files, and four, representing salmonid species, are present at the California Department of Fish and Game, Sacramento (CDFG, henceforth).

All of the original 151 CBH illustrations and one of those missing (P04073) bear USNM illustration file catalog numbers, beginning with the letter P. We have assigned the other two missing originals that are not represented by files, arbitrary catalog numbers, beginning with the letters XX. File P04073, contains only proof copies of the published version of the original.

Three of the CDFG illustrations, including two of the rainbow trout and one of the brook trout, were commissioned by Charles A. Vogelsang (executive officer of the CDFG, from 1901 to 1910). CBH signed and dated these illustrations 1910. The fourth illustration, Chinook salmon, is unsigned and undated. We do not treat the four CDFG illustrations separately below, but each is mentioned in our discussions of similar CBH paintings of the same salmonid species represented in the USNM collection of illustrations.

Most recently, Wales (1957) published color reproductions of the three 1910 dated CDFG illustrations, with credit to CBH. He also included a colored illustration of *Oncorhynchus*



Figure 52.—CBH paintings (A, B, E, F) and studies (C, D), all signed (study signatures include a circled s), none dated. A, late afternoon, Pacific, dimensions not provided; B, Laguna sunset, 20.2×30 in (51.4×76.2 cm); C, waves, sunset, dimensions not provided; D, sunset sky, 10×14 in (25.4×35.6 cm); E, San Jacinto, verbena, 20×30 in (50.8×76.2 cm); F, canyon of the San Joaquin, southern Sierras, sunrise, dimensions not provided. B, from Bonhams & Butterfields, San Francisco, 8 June 2004 auction; others collection and courtesy of the late Claire Hudson Brett; A, C, D, E © Jim Patton, 1986.

mykiss aguabonita (as *O. aguabonita*), which was neither dated nor credited to anyone, but is clearly based on a modification of CBH's 1904 painting of that subspecies (our Plate 15 F), to which dark spots were added on the body and some other minor modifications made to the color pattern.

The originals of the three missing USNM illustrations and their dispositions are unknown; however, they should have been present in the USNM files. We presume this because the three missing originals were published in two articles in two different Bulletins of the United States Bureau of Fisheries, in both of which the originals of all the other included CBH illustrations are in the USNM files.

In Plates 1–26, we present 151 figures copied (scanned) from the original illustrations and three copied from their first published versions. We do not include figures of the four CDFG illustrations, for which we had only poor copies.

Forty-one (26%) of CBH's illustrations of fishes were not published during his lifetime, and some of these were first published over 100 years after their preparation. Ono et al. (1983) first published two of the 41 illustrations 79 years after their preparation. Bond (1985) first published one 73 years after its preparation, and Murdy et al. (1997) first published 14, twelve prepared in 1896 and two prepared in early 1897. We publish 24 others, prepared between 1896 and 1903, for the first time, as much as 113 years after their preparation.

There are probably several reasons why many of the illustrations remained unpublished for so long. Some, based on the presence of frame marks (more below), were probably meant only for inclusion in USFC exhibitions (e.g. the Paris Exposition Universelle (World's Fair), some were initially planned for publications that did not materialize (see remarks concerning E. T. Seton below), and some appear to have been superfluous (e.g. P01788).

At least 18 of the illustrations, all in color, published after CBH's death, have a rectangular stain around their bordering surfaces. The stain appears to indicate that these illustrations had

been framed for some period of time and that either the matting was acidic or, if there were no mats, the frames have stained the illustrations.¹³⁹ Of the 18 illustrations 13 were done in 1896 at Woods Hole, Mass., and five were done in 1897, at Key West, Fla. They were exhibited at the 1900 Paris World's Fair, from which CBH received a bronze medal for his work.¹⁴⁰ After the fair, the framed illustrations may have graced the offices of the USFC for a while before being unframed and filed. These "previously framed" illustrations are each so indicated in the accounts.

The illustration file also contains one unfinished (and unpublished) CBH color illustration, P09683, *Mycteroperca phenax* (Jordan and Swain), begun in Key West, Fla., in 1896, which we have not included among our plates. It lacks only the color pattern on the lower third of the body. We have no information on why it was not completed.

One or both sides of many illustrations contain labels and information about the illustration, often written by CBH. On the reverse side of many of the colored illustrations, CBH often pasted a palette of the watercolors he used in preparing the illustrations (e.g. Plate 13).

The original white surface of the watercolor boards on which many of the illustrations were painted has become tan to brownish through time, indicating that either the boards are acidic or that covering sheets of acidic paper affected the surfaces. The discoloration seriously affects the appearance of

the paintings. For our publication, the discoloration was digitally eliminated by using the curves tool (control M) in Adobe Photoshop[®]¹⁴¹, with little, if any, modification of the images. The images on color Plates 25 and 26 were painted in oil against rectangular, variably dark areas of oil paint. In the published versions of these figures, the printer removed most of the dark areas and decreased the intensity of the portion that was retained. Although this produces a more attractive illustration, we elected to reproduce the original illustrations as closely as possible.

We have seen only one other technically complete CBH painting of a fish. It is a framed oil painting of the rainbow trout, *Oncorhynchus mykiss*, signed and dated 1913, which we saw in the home of CBH's daughter, Claire Hudson Brett, in June, 1989.¹⁴² It is very similar to P01499 (Plate 15 C), dated 1912, and somewhat less similar to P04054 (Plate 15B), dated 1911. The 1912 illustration was the last technical illustration of a fish that CBH prepared that may have been intended for publication, and the similar 1913 painting was probably completed shortly after it, and to our knowledge it has not been used in a publication. The 1912 illustration was first published in Bond (1985:135), an announcement for the 1985–89 exhibit, "Drawn from the Sea, Art in the Service of Ichthyology," curated by VGS, and on the poster that accompanied the exhibit. Aside from these publications and our Plate 15 C, we know of no other publications of this illustration.

It is a testament to the quality of CBH's illustrations of fishes that many were republished, even in recent times. For an appraisal of CBH's illustrative contributions, see section "Honors-Awards-Assessments."

¹⁴¹Mention of trade names does not imply endorsement by the National Marine Fisheries Service, NOAA.

¹⁴²She also gave VGS an underexposed 4×5-inch color transparency photograph of the painting, and mentioned that there were two other oil paintings of fishes, "one of my brother's [who is deceased] and one down town..." (CHB to VGS, 17 Sept. 1985). We do not know what "down town" referred to.

¹³⁹The 32 CBH illustrations framed and used in the 1985–88 "Drawn from the Sea" exhibit (more about this exhibit in the text), were under acid-free mats with elliptical openings. These mats did not stain the illustrations.

¹⁴⁰We at first thought it probable that these illustrations were framed for display at the 1898 International Fisheries Exposition in Bergen, Norway, at which CBH was awarded silver and bronze medals. These medals, however were for his illustrations of fishing vessels and a painting of a fishing method. Furthermore, plate 2 in Collins (1901) is a photograph of the section of the USFC exhibit showing framed illustrations of fishes, which were clearly not prepared by CBH: e.g. several portrayed fishes facing right, whereas all CBH fish illustrations show the fish facing left.

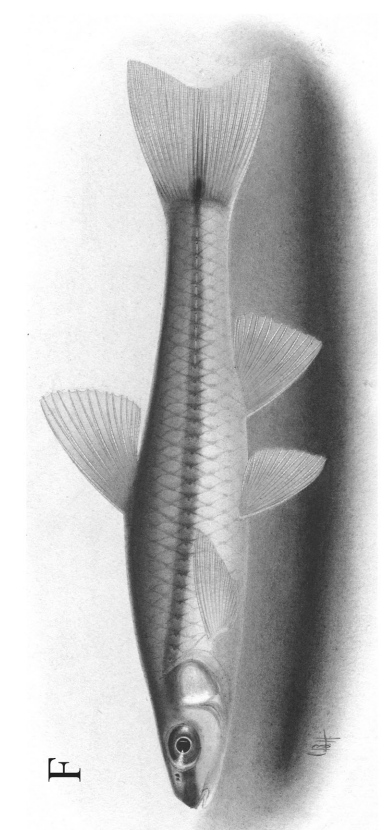
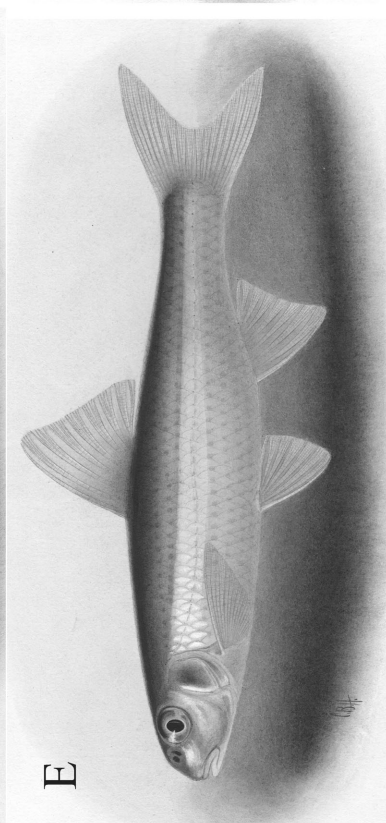
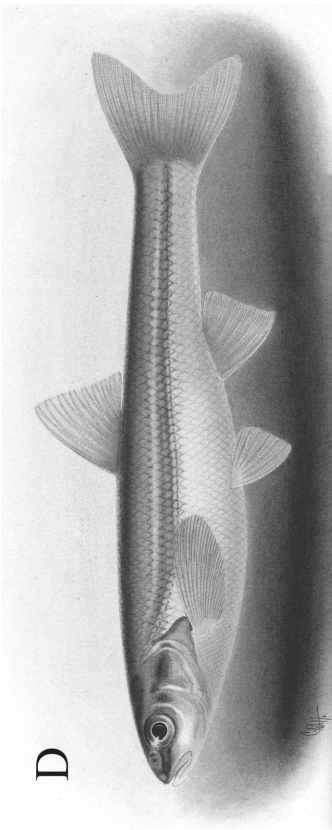
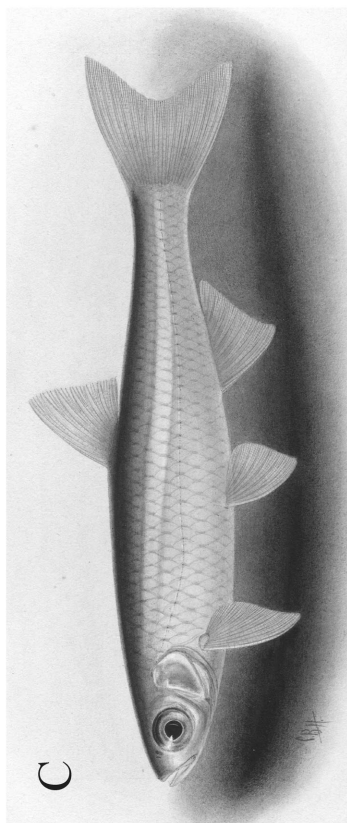
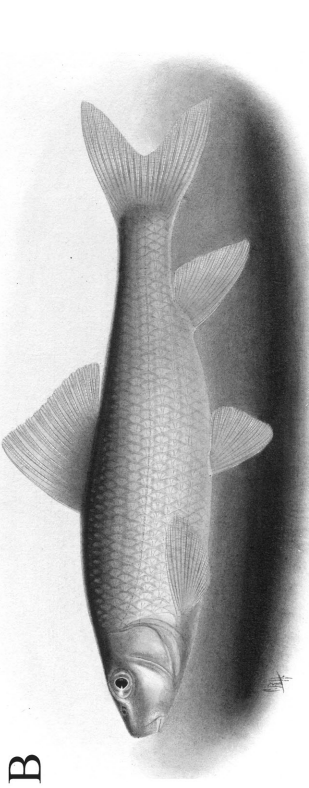
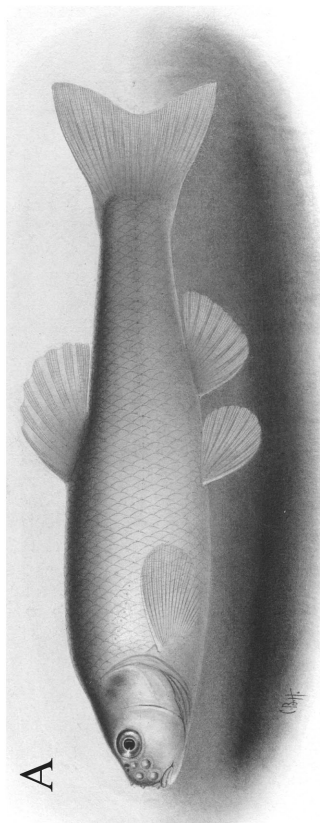


Plate 1.—A, *Pimephales promelas*, P08158; B, *Moxostoma anisurum*, P11040; C, *Notropis atherinoides*, P09407; D, *Couesius plumbeus*, P03728; E, *Macrhybopsis storeniana*; P13218; F, *Notropis bifrenatus*, P09413. For complete information on any individual figure see P number in section "The Illustration Listings."

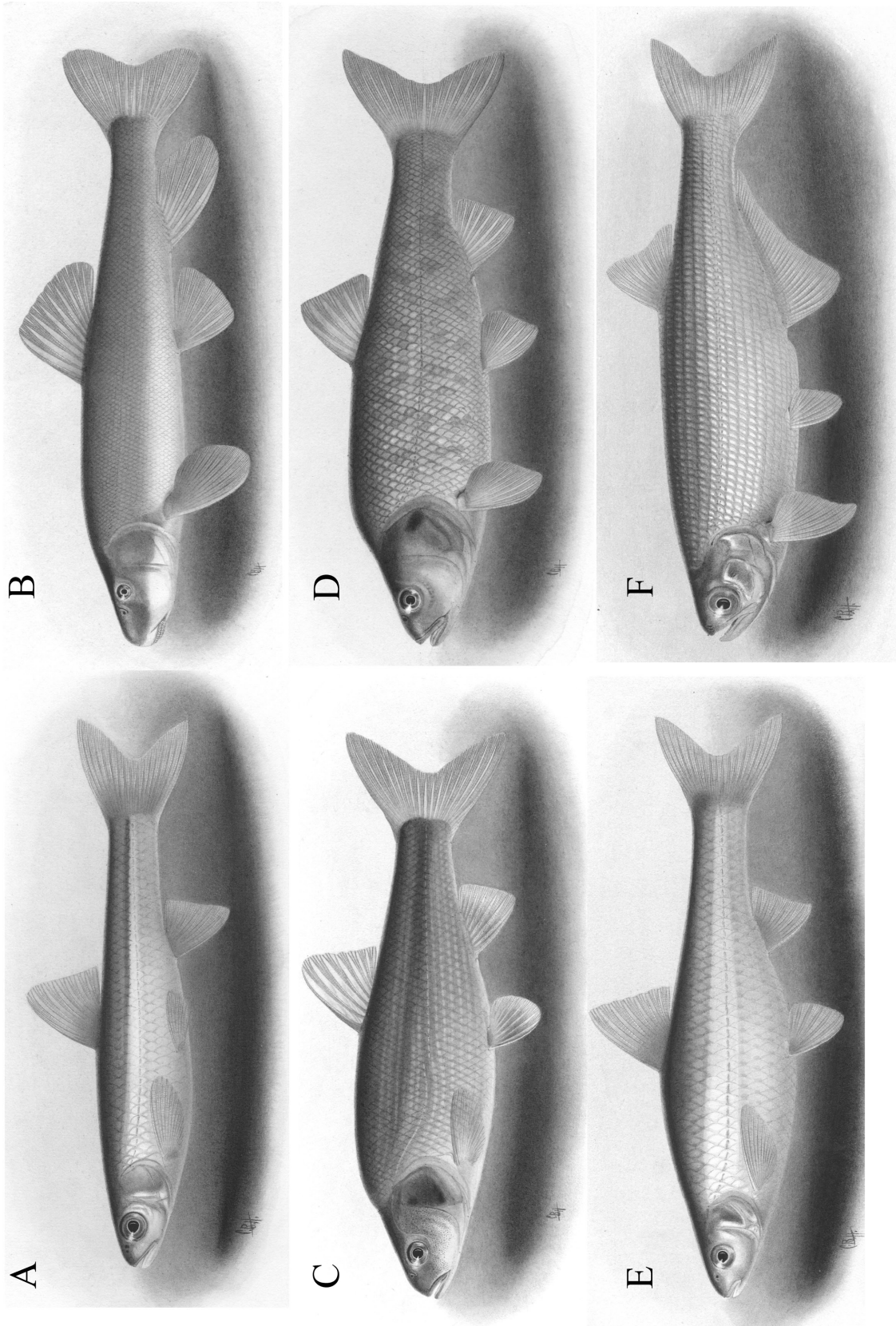


Plate 2.—A, *Notropis bleinnius*, P09436; B, *Catostomus warnerensis*, P02213; C, D, *Gila bicolor*, P06626, P06627; E, *Hybognathus nuchalis*, P13212; F, *Hiodon alosoides*, P12848. For complete information on any individual figure see P number in section "The Illustration Listings."

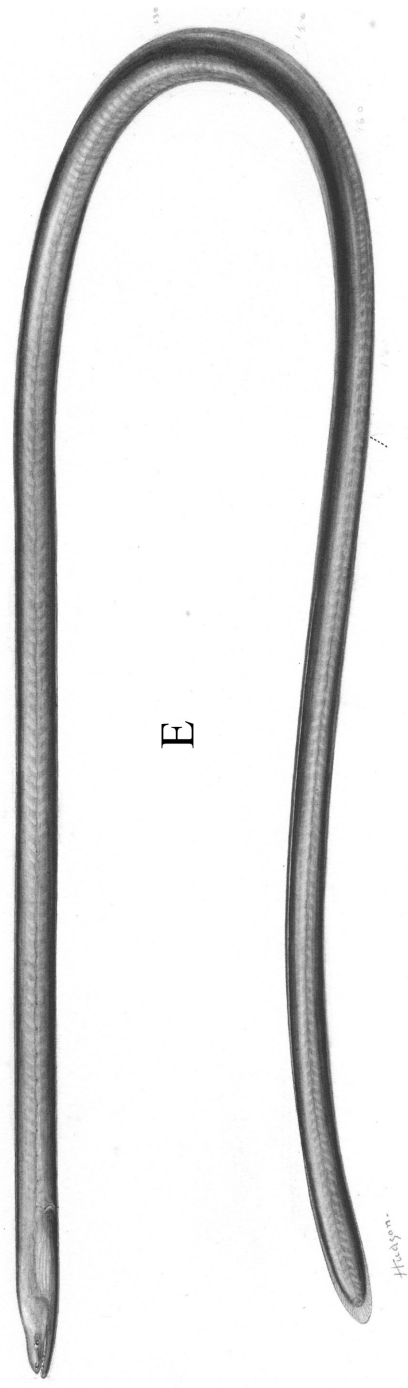
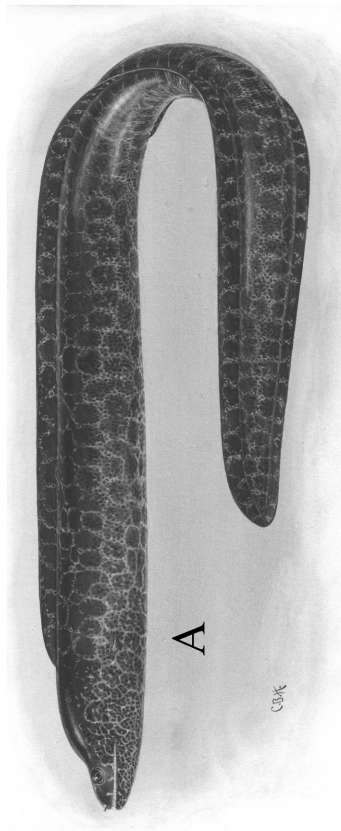
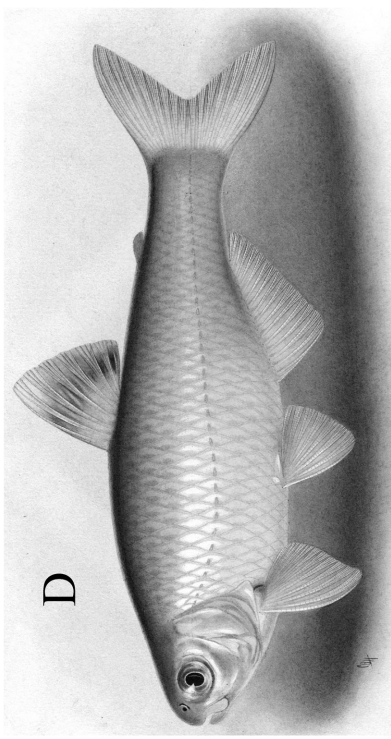
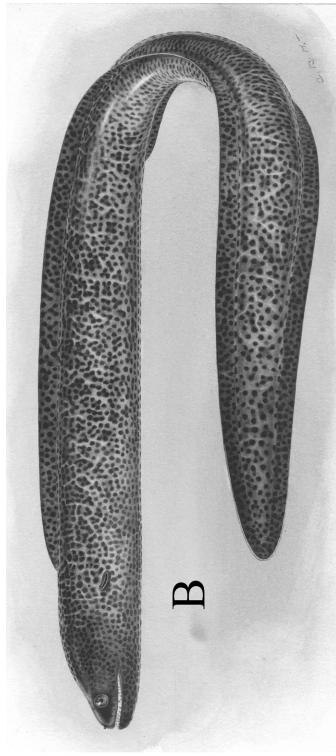


Plate 3.—A, *Gymnothorax pictus*, P11787; B, *Gymnothorax flaimarginatus*, P11800; C, *Gymnomuraena zebra*, P11719, D, *Bryconamericus eigenmanni*, P01358; E, *Moringua edwardsi*, P00818. For complete information on any individual figure see P number in section "The Illustration Listings."

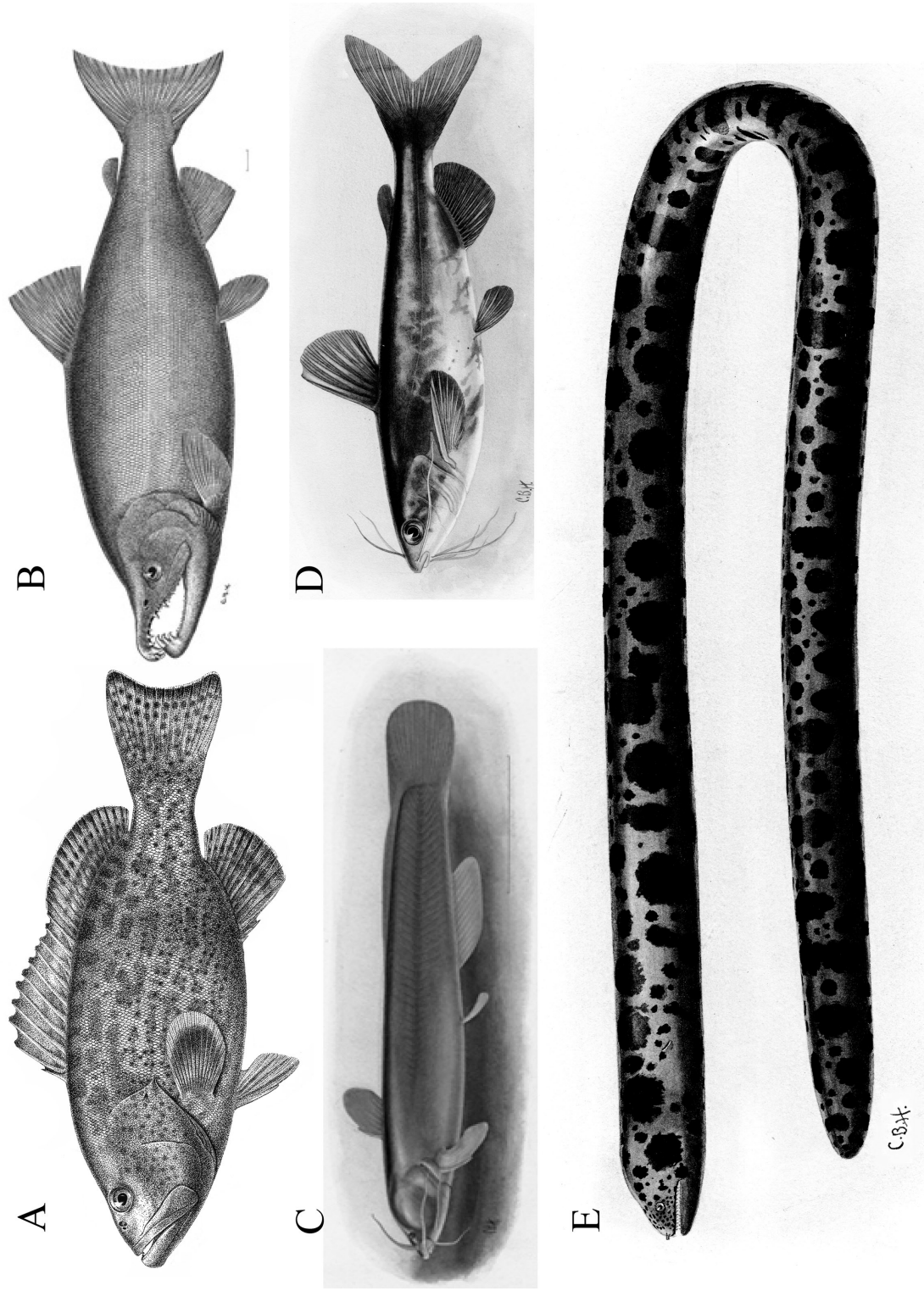
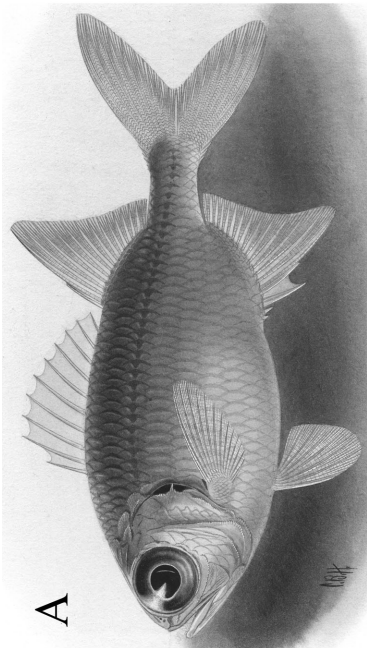
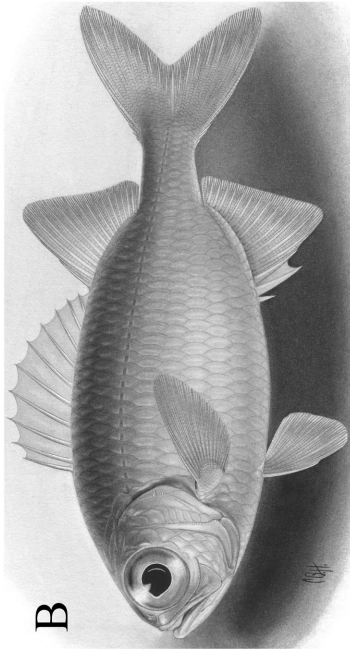


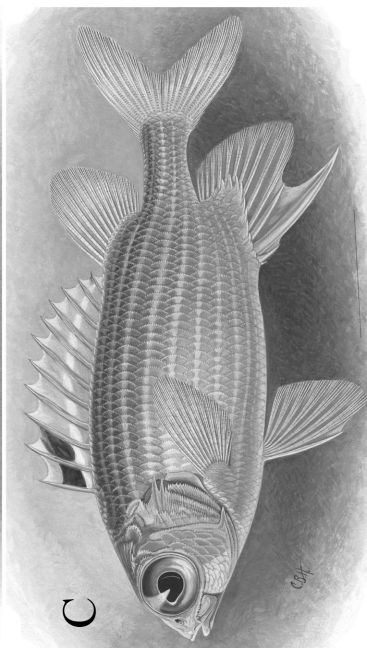
Plate 4.—A, *Myceteroperca venenosa*, P09663; B, *Oncorhynchus keta*, P08857; C, *Liobagrus reinii*, P14929; D, *Pseudobagrus ransonnetti*, P11183; E, *Scuticaria tigrina*, P05663. For complete information on any individual figure see P number in section The Illustration Listings.



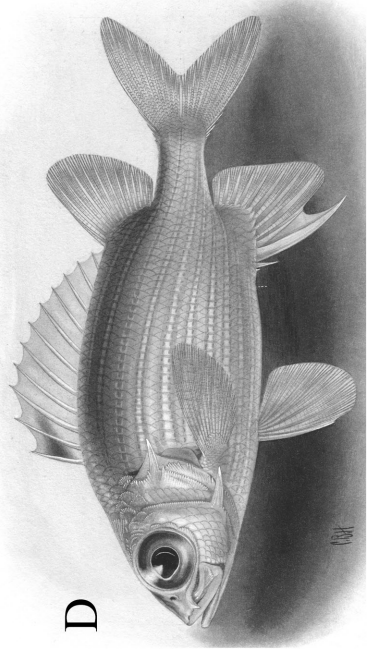
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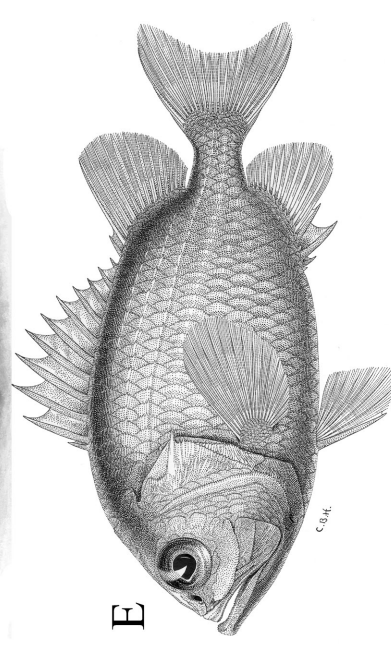
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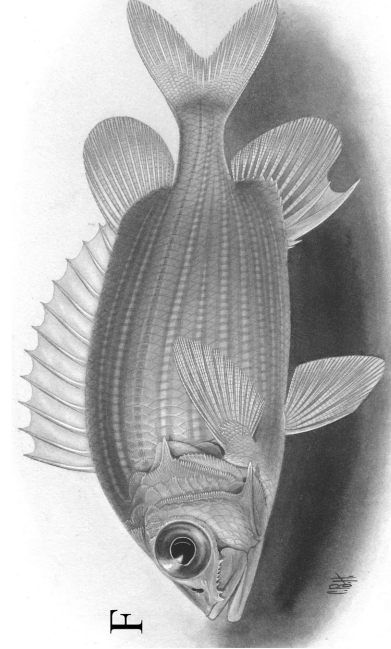
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Plate 5.—Holocentrid fishes: A, *Myripristis amaena*, P09557; B, *M. amaena*, P09548; C, *Sargocentron itodai*, P01840; D, *S. xantherythrum*, P13132; E, *Ostrichthys japonicus*, P08806; F, *Sargocentron ensifer*, P13124. For complete information on any individual figure see P number in section "The Illustration Listings."

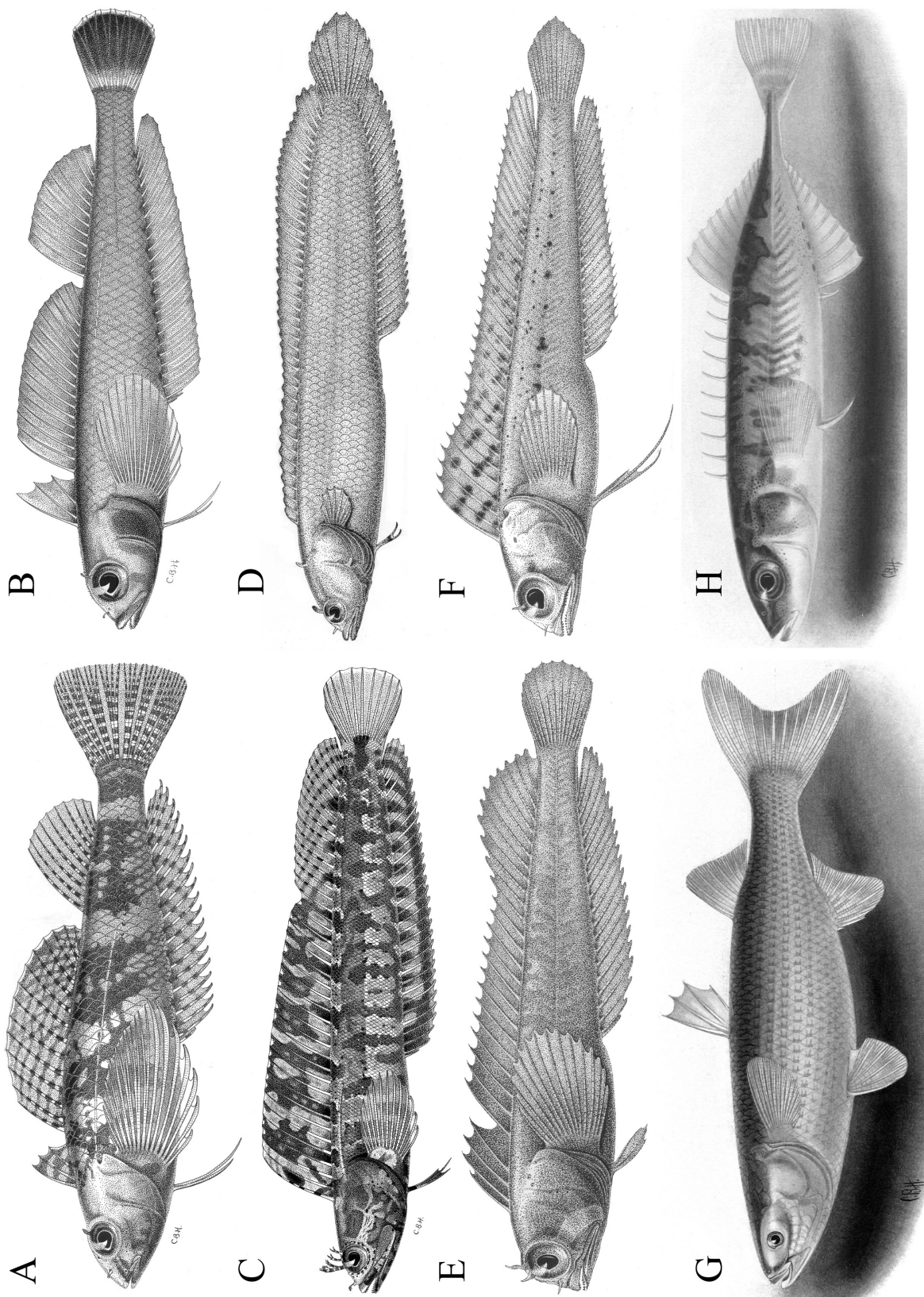


Plate 6.— A, *Enneapterygius theostomus*, P04554; B, *Springerichthys bapturnus*, P04556; C, *Neoclinus bryope*, P04272; D, *Stathmonotus stahli*, P01391; E, *Coralliozetus cardonae*, P03416; F, *Emblemaria pandonis*, P10343; G, *Mugil cephalus*, P11005; H, *Pungitius pungitius*, P07351. For complete information on any individual figure see P number in section "The Illustration Listings."

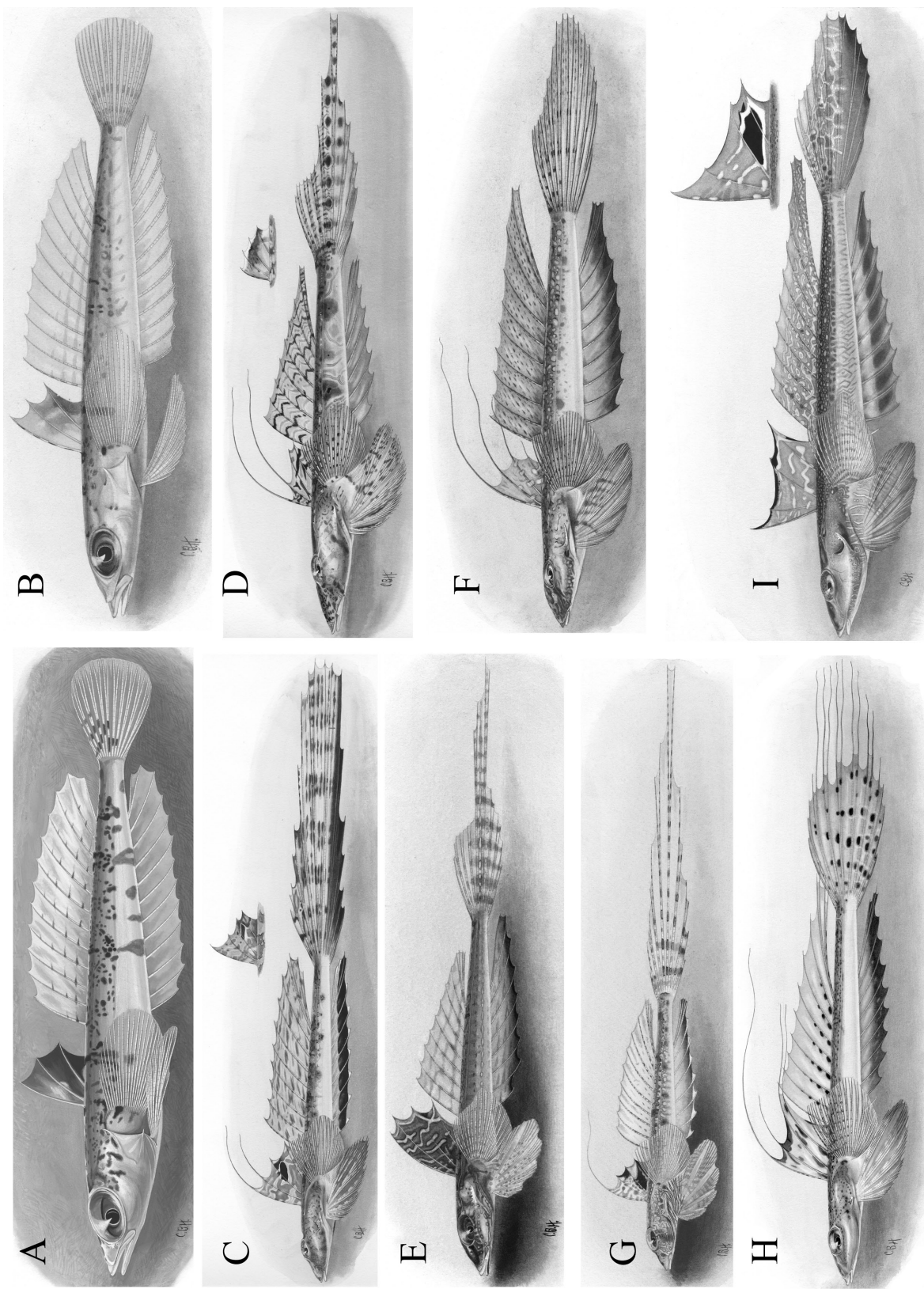


Plate 7.—Callionymoid fishes (see also Plate 8, A–C): A, B, *Draconetta xenica*, P10048, P10047; C, *Callionymus japonicus*, P17575, inset is female spinous dorsal fin; D, *C. variegatus*, P17581, inset is female spinous dorsal fin; E, *C. caeruleonotatus*, P02327; F, *C. doryssus*, P15709; G, *C. decoratus*, P02349; H, I, *C. valenciennae*, P21866, P17485, inset is female spinous dorsal fin. For complete information on any individual figure see P number in section “The Illustration Listings.”

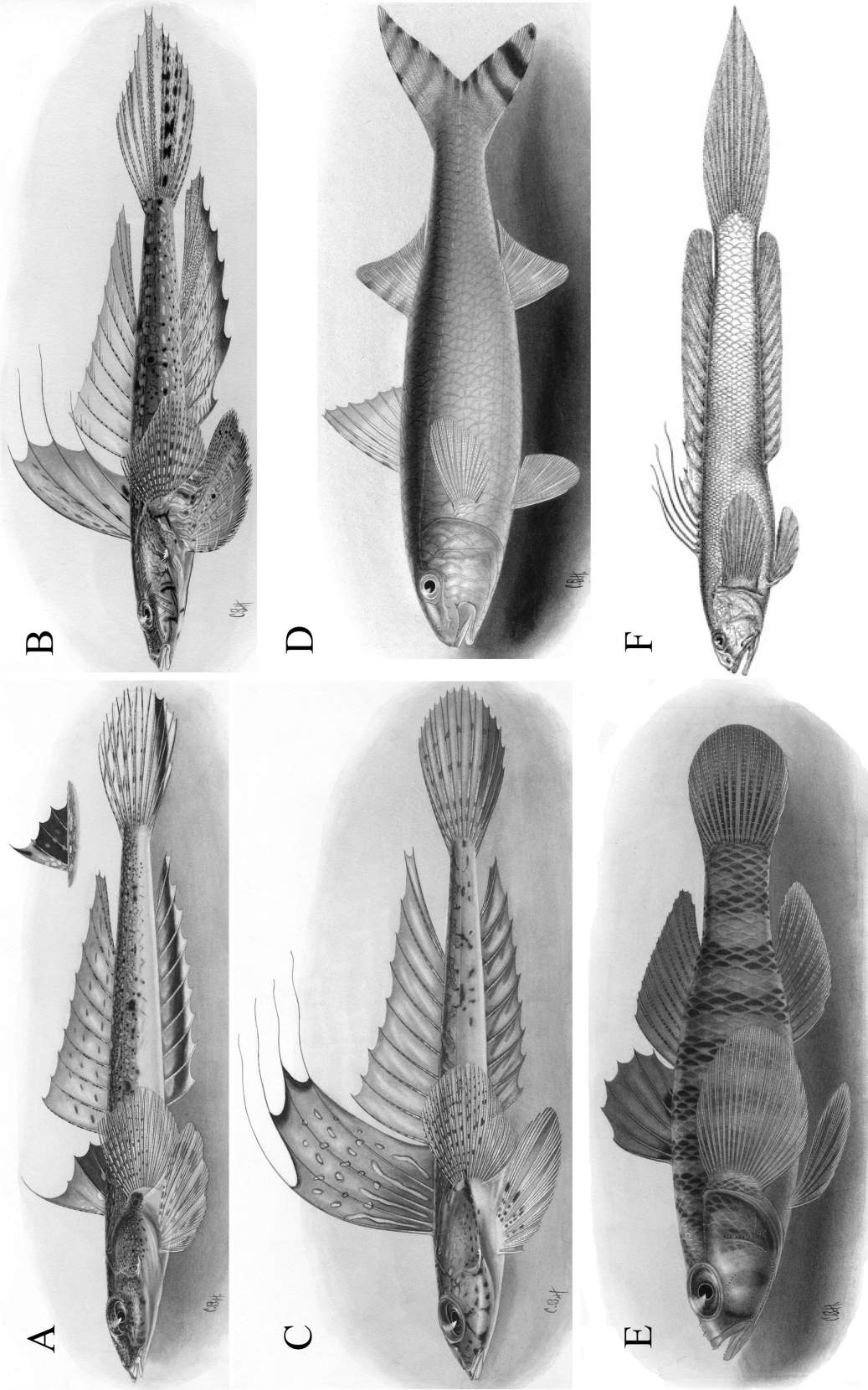


Plate 8.—A, *Repomucenus lunatus*, P15477, inset is female spinous dorsal fin; B, *Callionymus enneactis*, P02328; C, *Repomucenus virgatus*, P15479; D, *Upeneus arge*, P04503; E, *Priolepis eugentius*, P02388; F, *Gobionellus oceanicus*, P11561. For complete information on any individual figure see P number in section "The Illustration Listings."

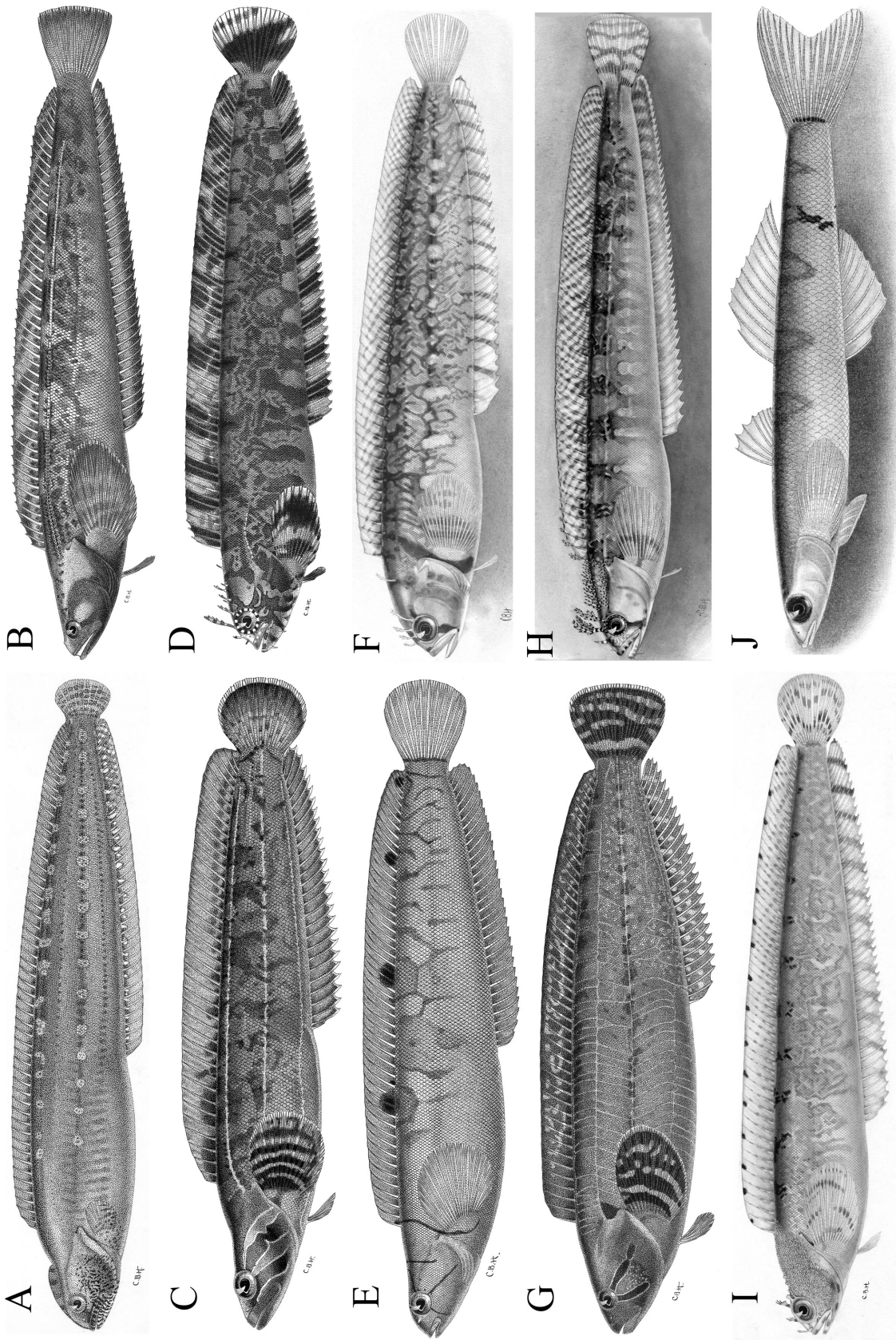
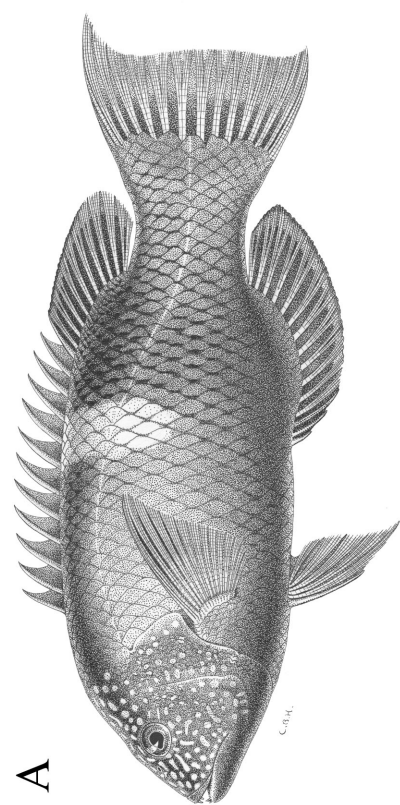
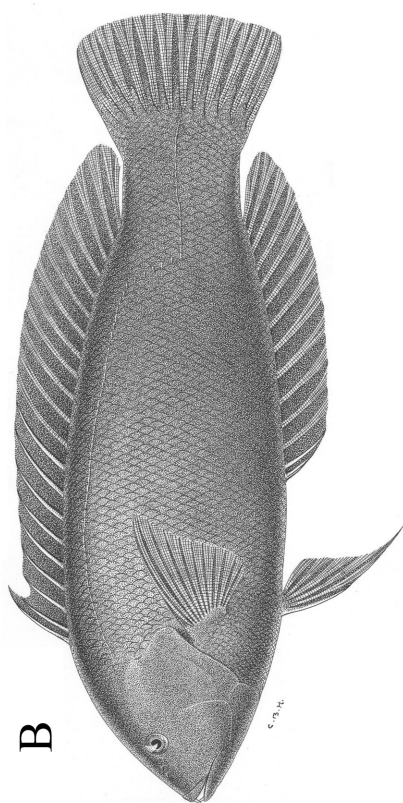


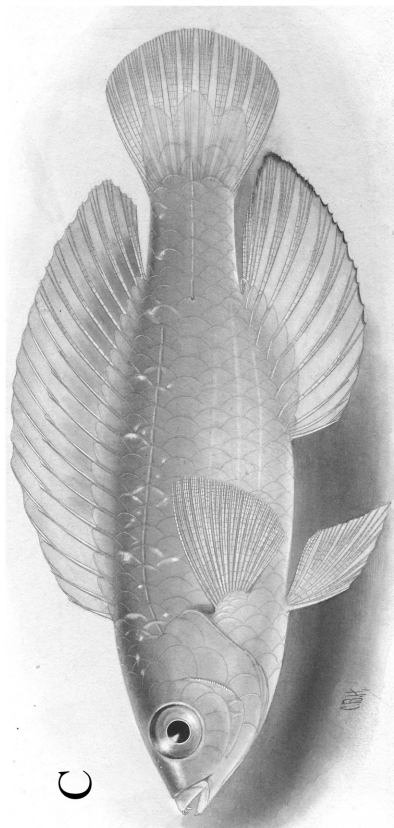
Plate 9.—A, *Alectrias benjamini*, P00183; B, *Stichaeus nozawae*, P17579; C, *Ernogrammus hexagrammus*, P10567; D, *Chirolophis japonicus*, P17576; E, *Opisthocentrus zonope*, P17577; F, *Chirolophis saitone*, P17580; G, *Stichaeopsis nana*, P17578; H, *Bryozoichthys lysimus*, P22113; I, *Chirolophis tarsodes*, P02378; J, *Sicyopterus stimpsoni*, P04361. For complete information on any individual figure see P number in section "The Illustration Listings."



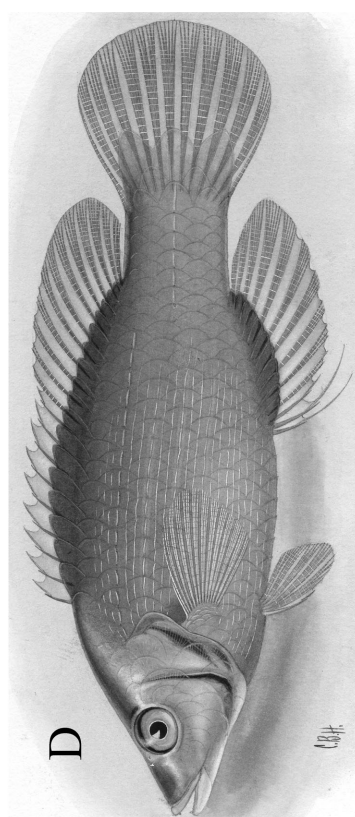
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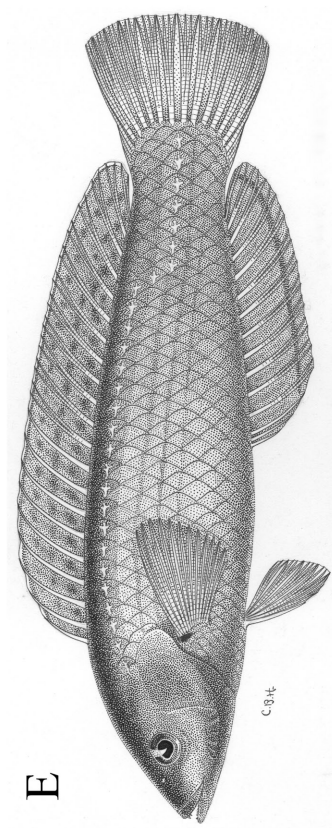
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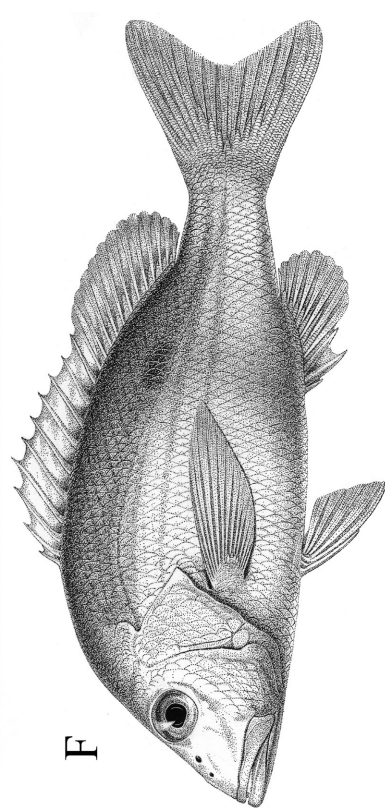
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Plate 10.—A, *Bodianus perditio*, P14692; B, *Coris aygula*, P03497; C, *Cirrhitilabrus jordani*, P03198; D, *Pseudocheilinus evanidus*, P07225; E, *Halichoeres bleekeri*, P09474; F, *Lutjanus synagris*, P15116. For complete information on any individual figure see P number in section "The Illustration Listings."

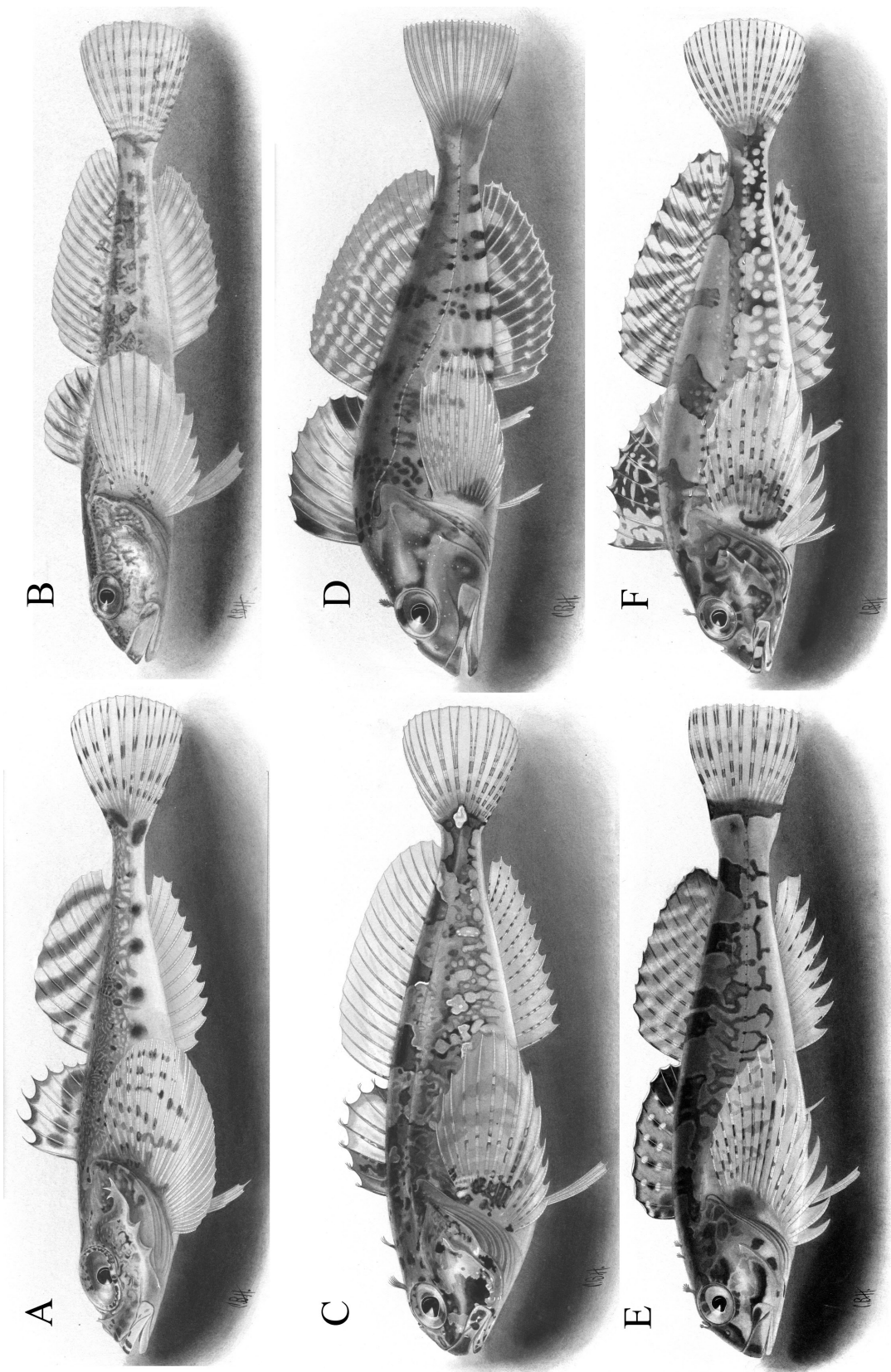
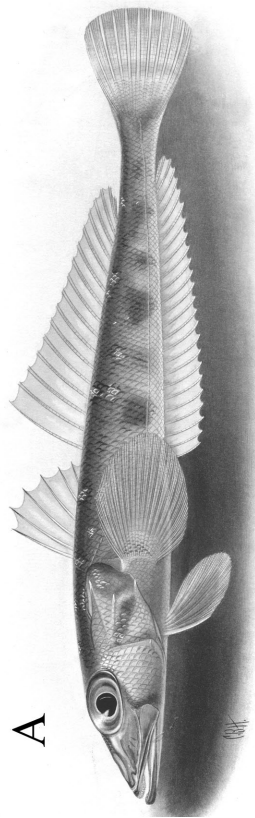
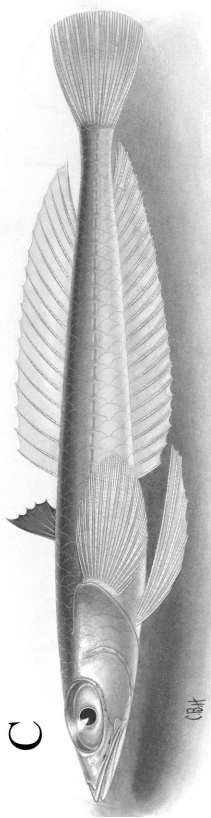


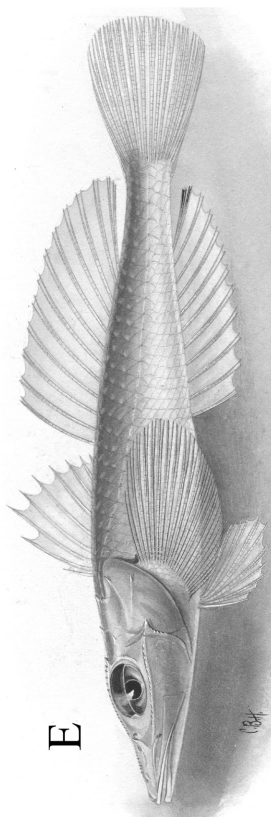
Plate 11.—Cottid fishes: A, *Cottiusculus schmidti*, P03674; B, *Cottus bairdii*, P03723; C, *Porocottus allisi*, P05934; D, *Pseudoblennius zonostigma*, P07220; E, *Ocynectes maschalis*, P08697; F, *Furcina osimae*, P11241. For complete information on any individual figure see P number in section "The Illustration Listings."



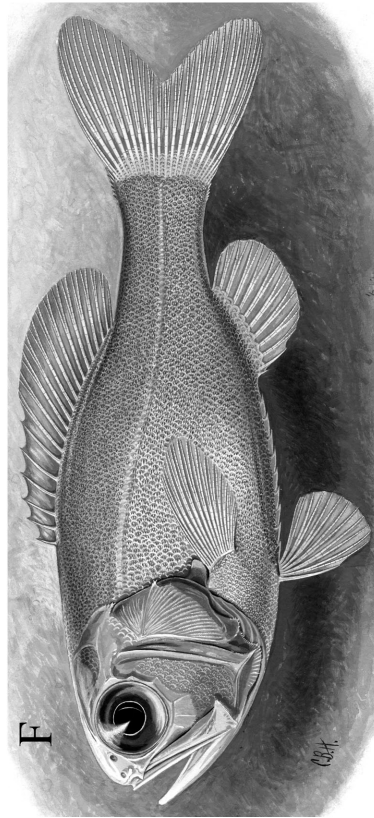
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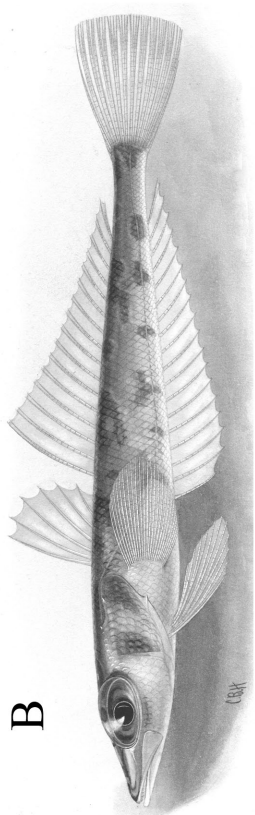
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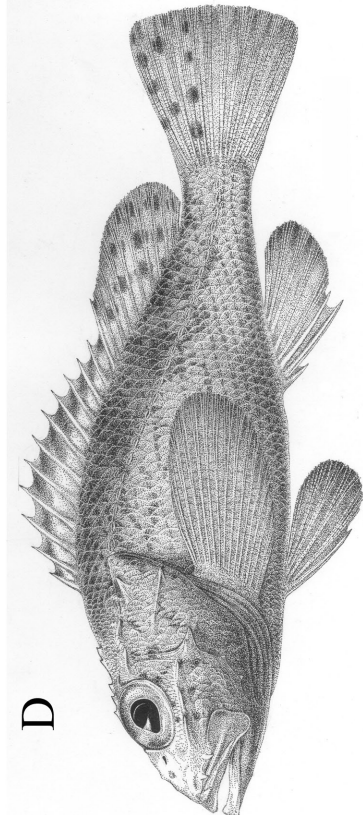
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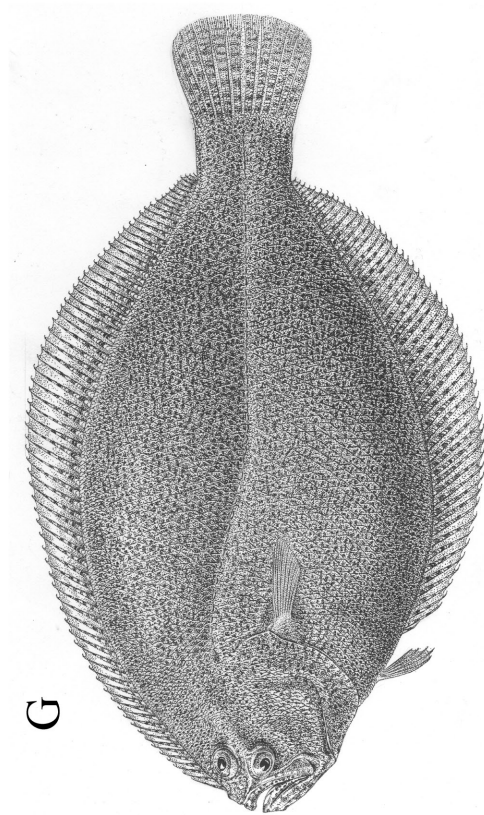
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Plate 12.—A, *Chironema chryseres*, P09228; B, *C. squamiceps*, P03128; C, *Pteropsaron incisum*, P07188; D, *Neomerinthe beanorum*, P06885; E, *Bembradium roseum*, P01735; F, *Aulonrarchichthys prosthemius*, P08510; G, *Citharichthys arenaceus*, P03239. For complete information on any individual figure see P number in section "The Illustration Listings."

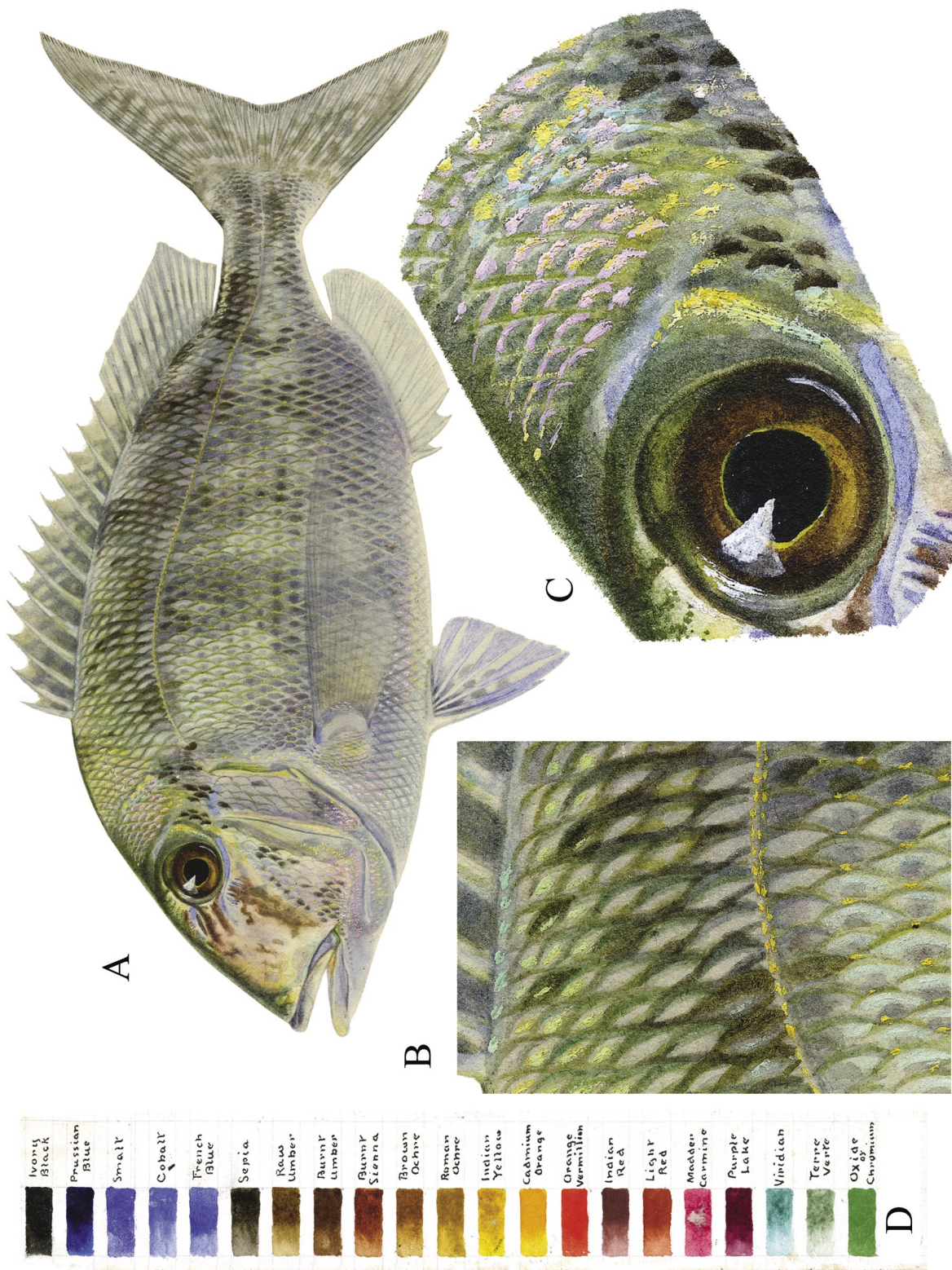


Plate 13.—*Calamus bajonado*, P02473: A, 0.71X original painting; B, section of A below anterior 5 dorsal-fin spines, 2.1X original; C, section of A near eye, 2.8X original (sections enlarged to show artistic technique; note use of both watercolors and gouache in C); D, palette of watercolors used in painting A (on piece of paper pasted by CBH on reverse side of illustration board). For more information on P02473 see section “The Illustration Listings.”

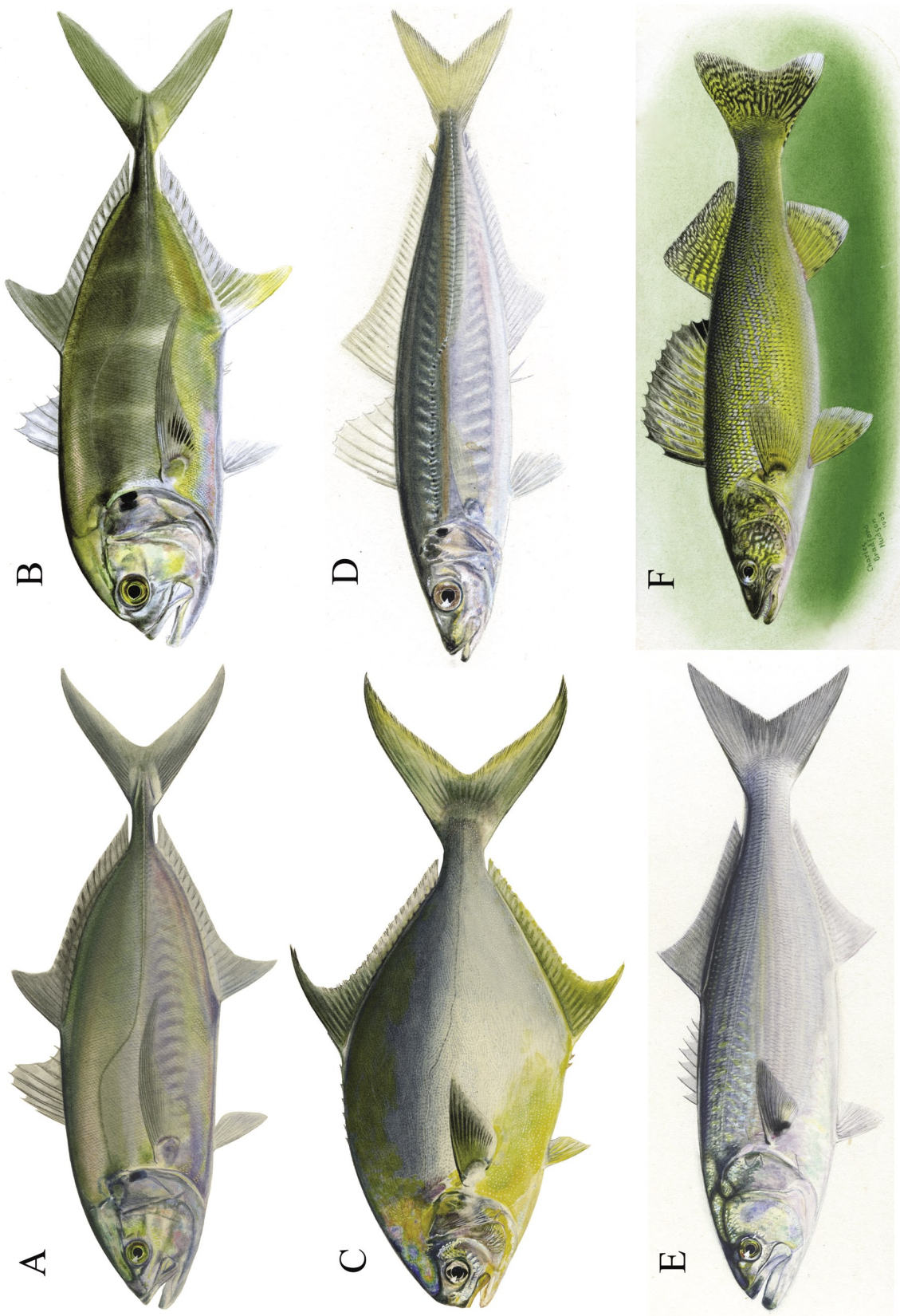
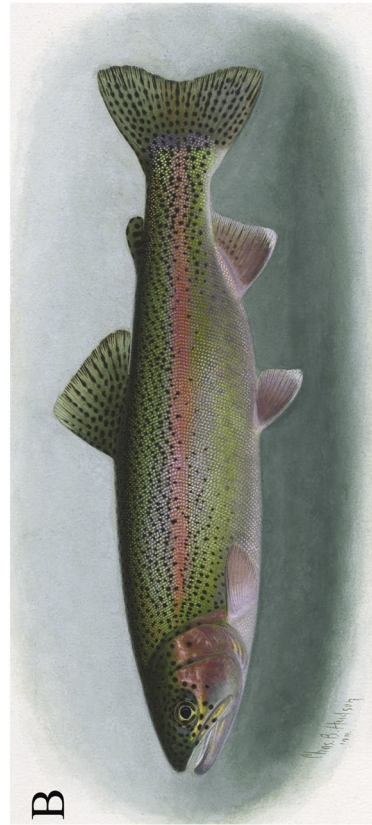


Plate 14.—A, *Caranx crysos*, P01919; B, *C. hippos*, P08206; C, *Trachinotus carolinus*, P01039; D, *Decapterus punctatus*, P04163; E, *Pomatomus saltatrix*, P01035; F, *Sander vitreus*, P05171. For complete information on any individual figure see P number in section "The Illustration Listings."



B



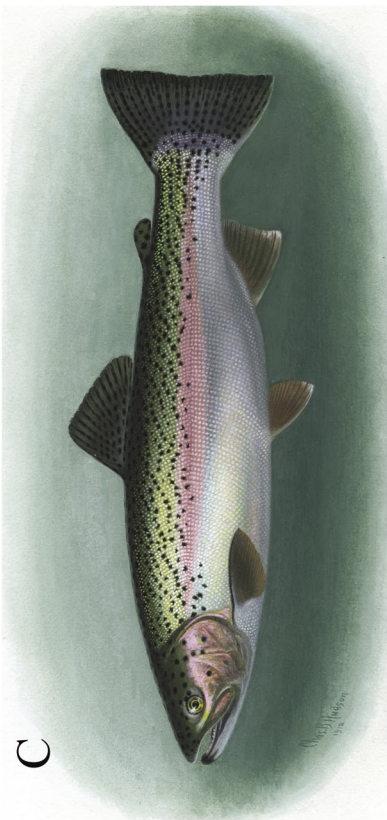
D



F



A



C



E

Plate 15.—Forms of California *Oncorhynchus mykiss*: A, *O. m. gilberti*, P01500; B, *O. m. mykiss*, McCloud River, P04054; C, *O. m. mykiss*, Scott's Creek, Santa Cruz County, P01499; D, *O. m. whitei*, P04042; E, F, *O. m. aguabonita*, South Fork, Kern River, P04043; Volcano Creek, P01787. For complete information on any individual figure see P number in section "The Illustration Listings."



Plate 16.—Salmonid fishes: A–C, *Oncorhynchus clarkii henshawi*, P04046 (female), P01788 (immature), P04047 (male); D, E, *Salmo salar*, P04058, P04057; F, *Oncorhynchus tshawytscha*, P04040. For complete information on any individual figure see P number in section “The Illustration Listings.”

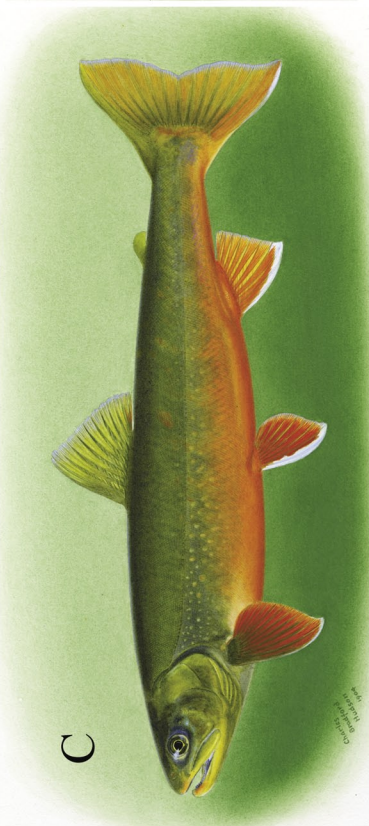
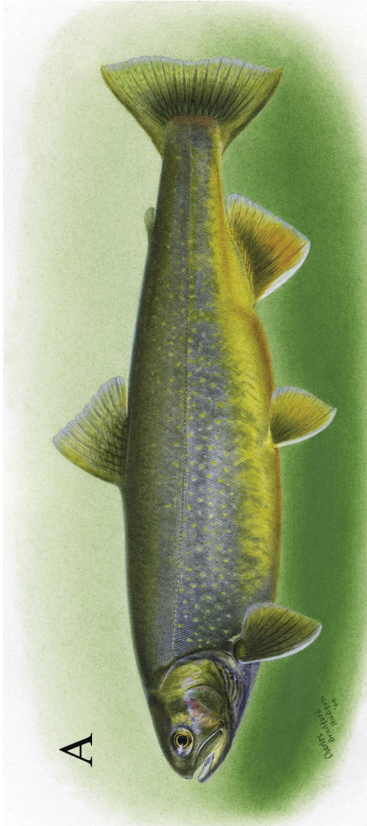
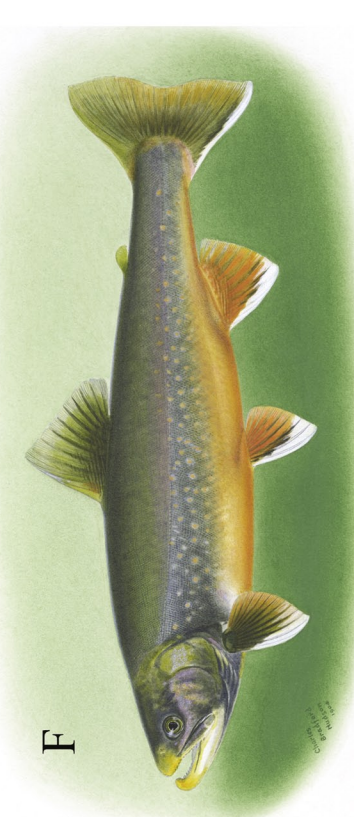
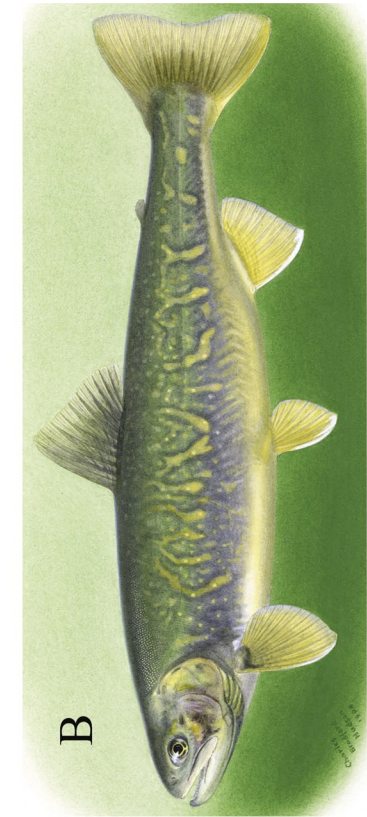


Plate 17.—Salmonid fishes: A-D, *Salvelinus alpinus*, P04059, P04070, P04071, P04072; E, F, *Salvelinus aureolus*, P04061, P04062. For complete information on any individual figure see P number in section "The Illustration Listings."

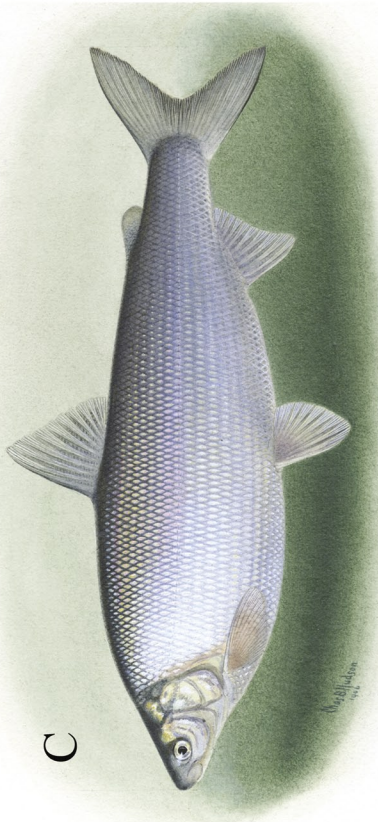
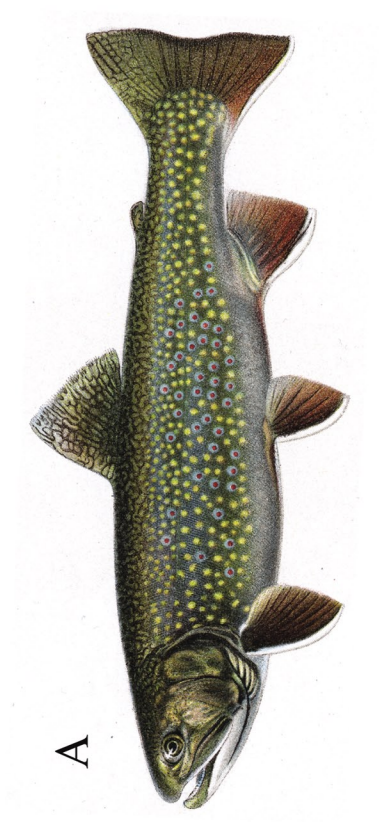
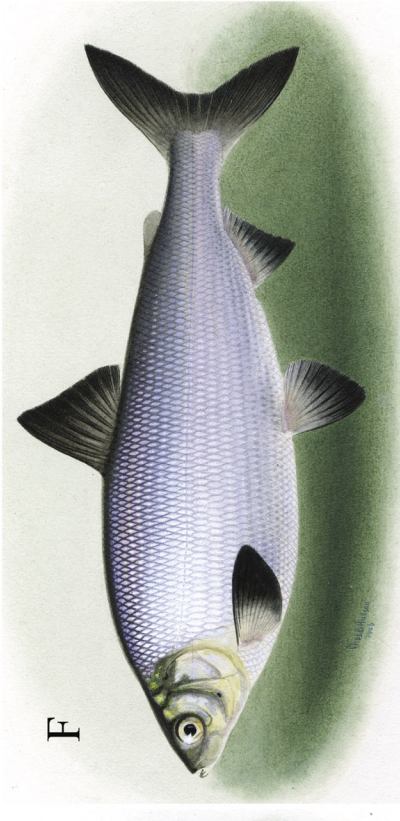
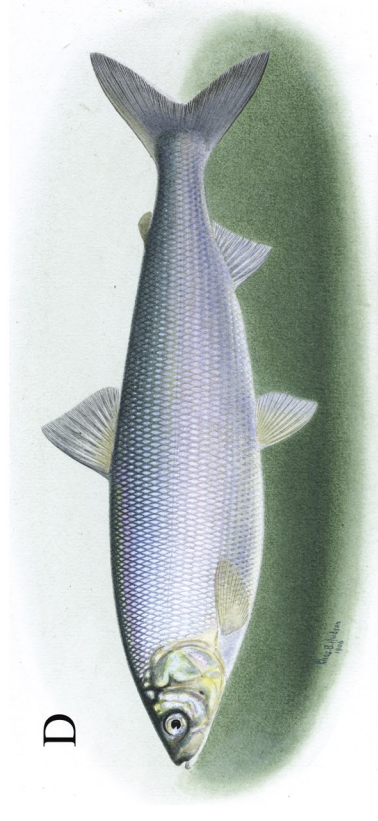
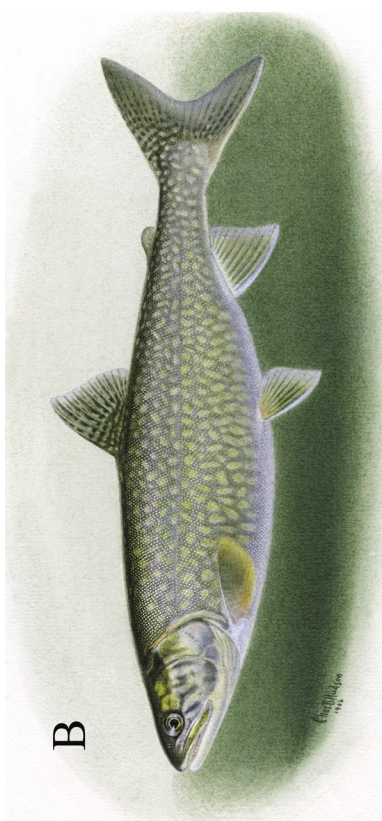
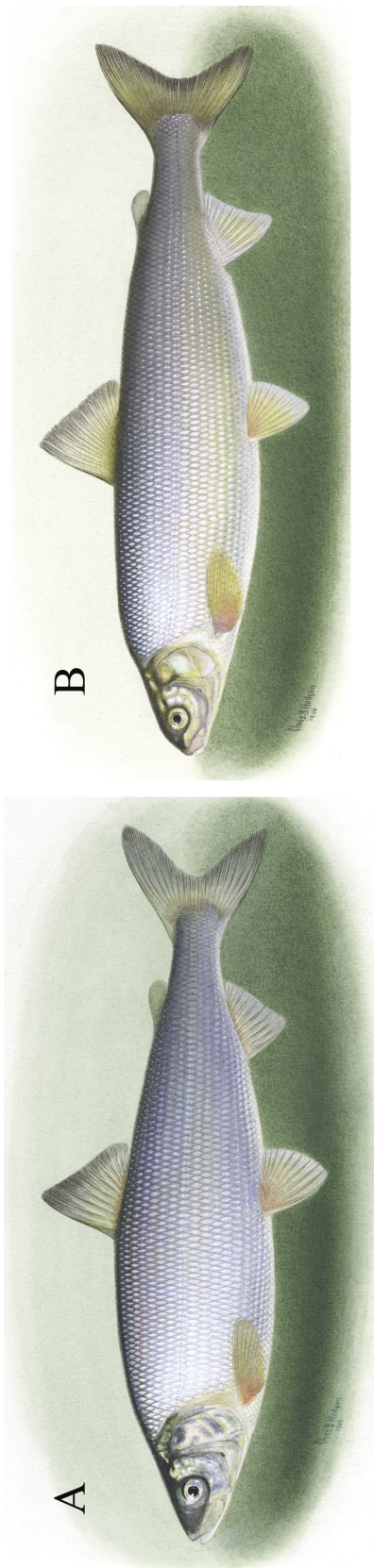


Plate 18.—Salmonid fishes: A, *Salvelinus fontinalis*, P04073; B, *S. namaycush*, P04064; C, *Coregonus clupeaformis*, P03444; D, *C. artedii*, P03445; E, *C. johanna*, P14859; F, *C. nigripinnis*, P14870. For complete information on any individual figure see P number in section "The Illustration Listings."



A

B

C



D

E

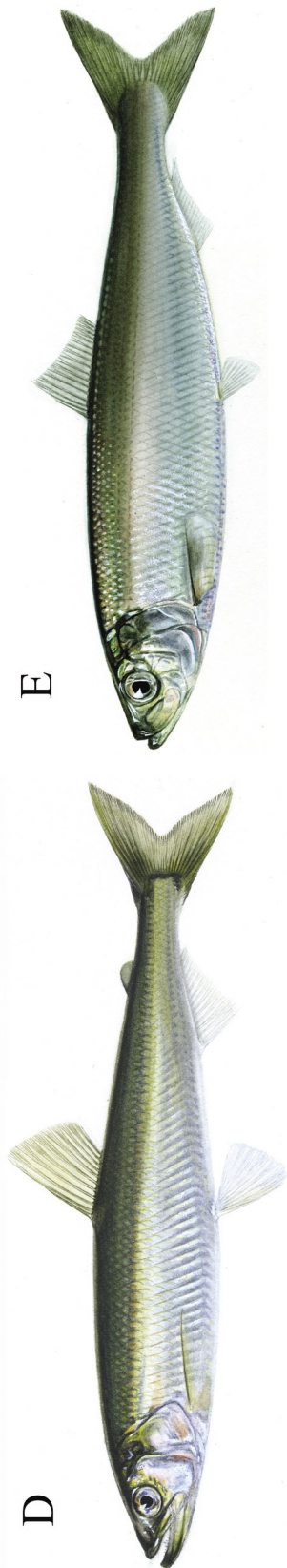
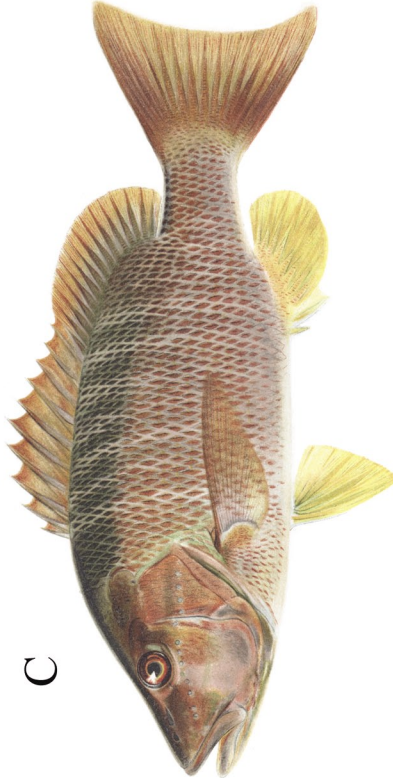


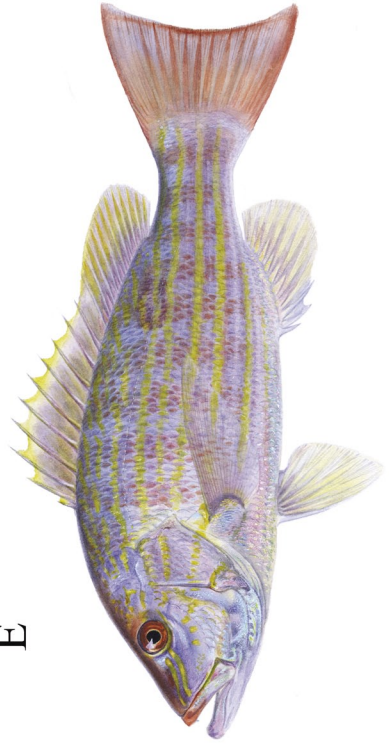
Plate 19.—A, *Coregonus* species? P03462; B, *Prosopium cylindraceum*, P03484; C, *Anguilla rostrata*, P00979; D, *Osmerus mordax*, P08787; E, *Clupea harengus*, P00980; For complete information on any individual figure see P number in section "The Illustration Listings."



A



C



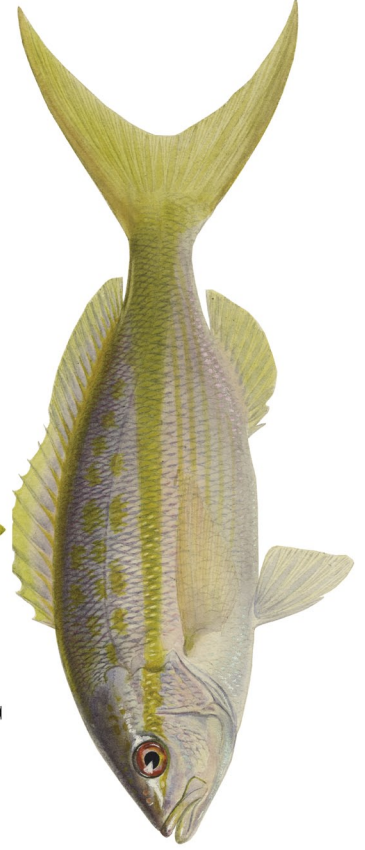
E



B



D



F

Plate 20.—Lutjanid fishes (also Plate 10 F): A, *Lujjanus analis*, P15080; B, *L. griseus*, P00995; C, *L. jocu*, XX002; D, *L. apodus*, P15082; E, *L. synagris*, P11829; F, *Ocyurus chrysurus*, P01529. For complete information on any individual figure see P or XX number in section "The Illustration Listings."

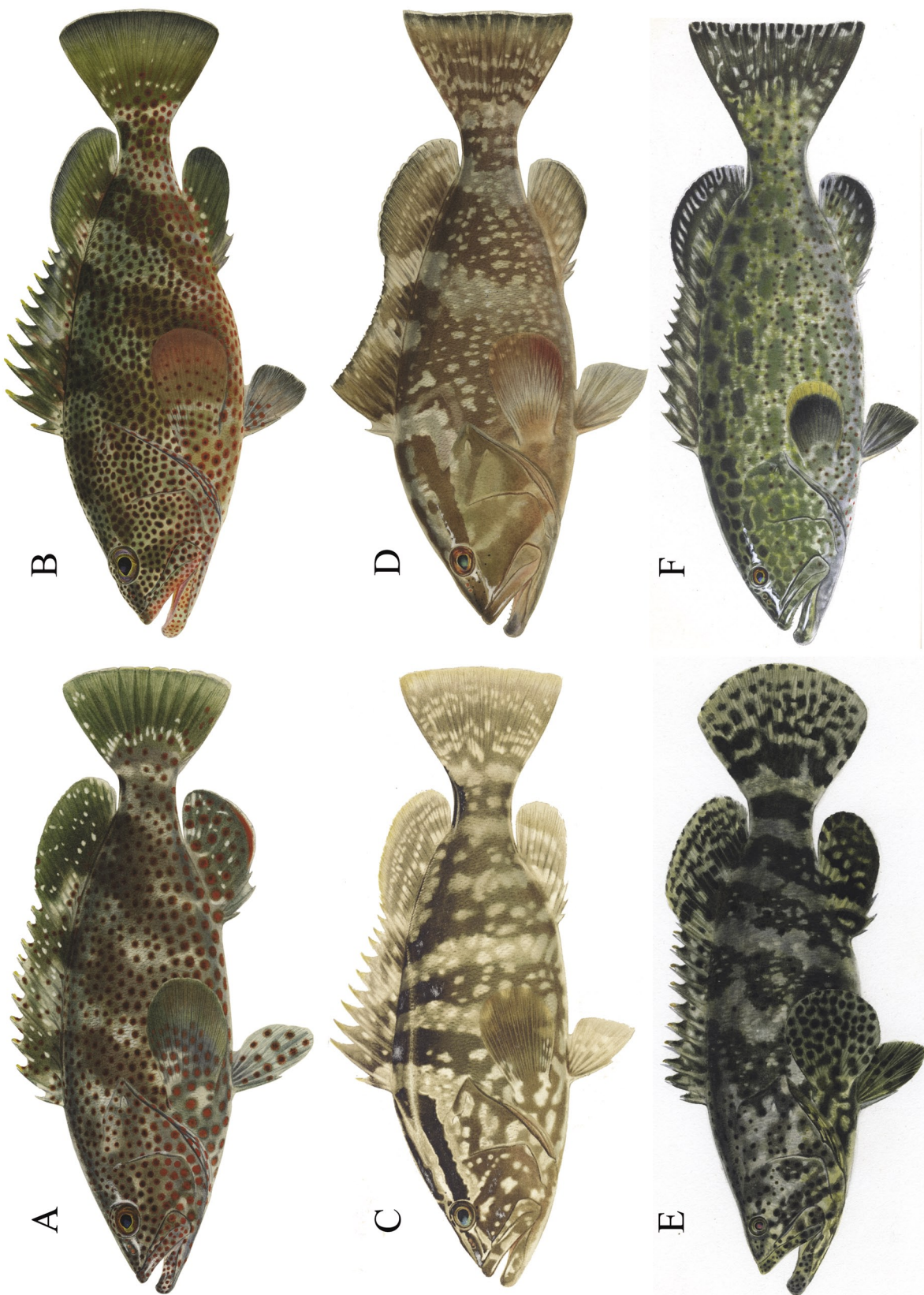


Plate 21.—Serranid fishes (see also Plates 4 A, 22 A, B): A, *Epinephelus adscensionis*, P10448; B, *E. guttatus*, P10475; C, *E. striatus*, XX001; D, *E. morio*, P10482; E, *E. itajara*, P07159; F, *Myceterperca venenosa*, P09681; For complete information on any individual figure see P or XX number in section "The Illustration Listings."



A



B



C



D



E



F

Plate 22.—A, *Mycteroperca bonaci*, P09660; B, *M. microlepis*, P00991; C, *Fundulus majalis*, male, P00985; D, *F. majalis*, female, P00986; E, *Myoxocephalus octodecemspinosus*, P01003; F, *Pseudopleuronectes americanus*, P01008. For complete information on any individual figure see P number in section "The Illustration Listings."

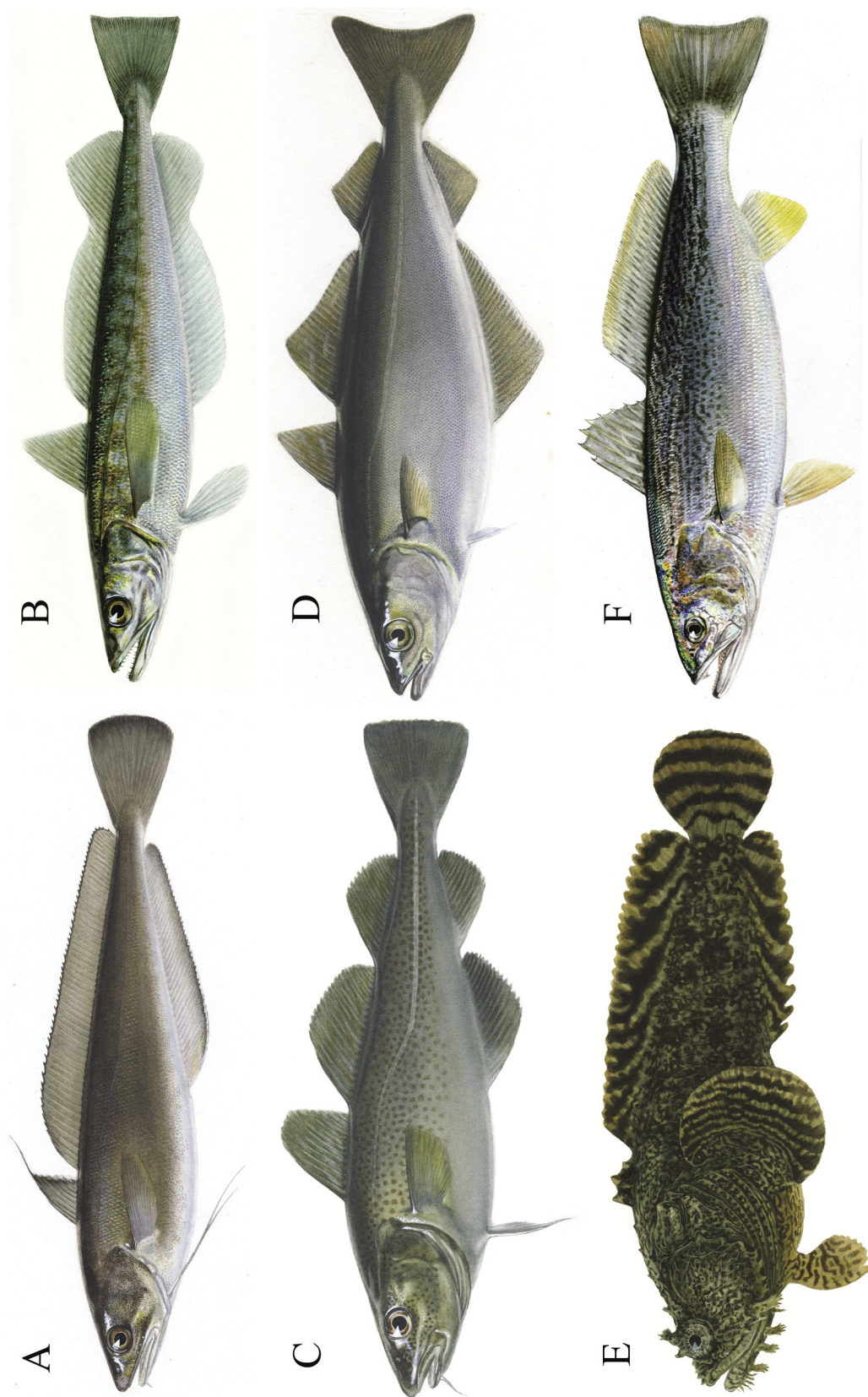


Plate 23.—A, *Urophycis tenuis*, P07976; B, *Merluccius bilinearis*, P00984; C, *Gadus morhua*, P01115; D, *Pollachius virens*, P00982; E, *Opsanus tau*, P00981; F, *Cynoscion regalis*, P00997. For complete information on any individual figure see P number in section "The Illustration Listings."

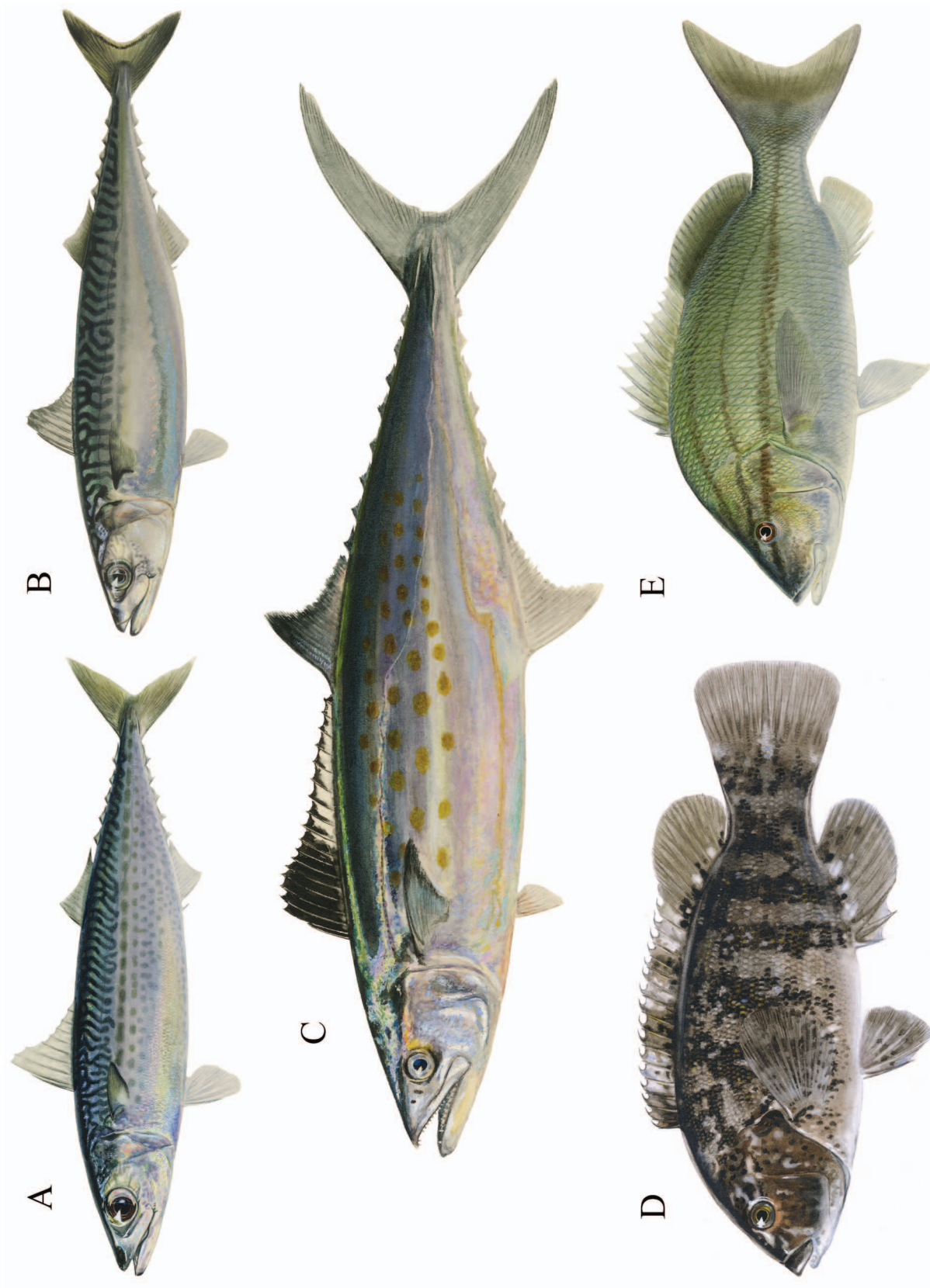


Plate 24.—A, *Scomber colias*, P01001; B, *S. scombrus*, P05890; C, *Scomberomorus maculatus*, P01002; D, *Tautoga onitis*, P00999; E, *Haemulon macrostomum*, P01528. For complete information on any individual figure see P number in section “The Illustration Listings.”

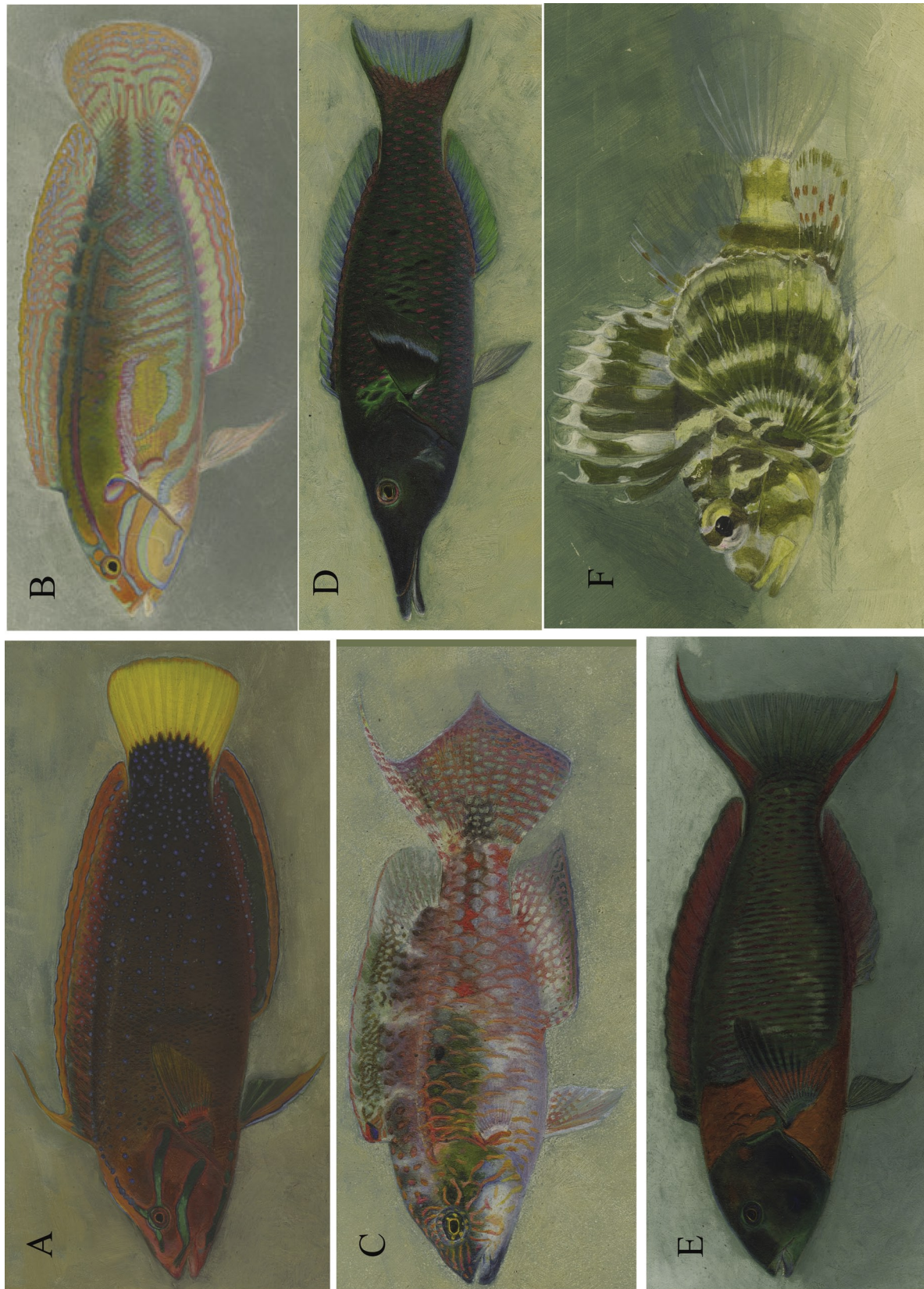


Plate 25.—CBH oil paintings done in Honolulu, Hawaii, 1901 (published images were isolated from backgrounds): A, *Coris gaimard*, P03505; B, *C. venusta*, P03513; C, *Oxycheilinus bimaculatus*, P02933; D, *Gomphosus varius*, P11628; E, *Thalassoma diprery*, P04925; F, *Dentrochirus barberi*, P04008. For complete information on any individual figure see P number in section “The Illustration Listings.”



Plate 26.—CBH oil paintings done in Honolulu, Hawaii, 1901 (published images were isolated from backgrounds): A, *Rhinecanthus rectangulus*, P01439; B, *Arothron hispidus*, P01276; C, *Paracirrhites forsteri*, P08659; D, *Cirrihitops pimulatus*, P03214; E, *Cirrihitops fasciatus*, P08658; F, *Paracirrhites arcatus*, P08657. For complete information on any individual figure see P number in section “The Illustration Listings.”

The Illustration Listings

Each figure is listed in numeric sequence by its illustration catalog number, followed by the plate number and alphabetic position on the plate in which it appears, and the current scientific name of the species (which is the same as that which appears in the legend to the plate). We chose an overall sequential listing, as opposed to grouped listings by plate, because many of the comments and discussions refer to several of the illustrations and we found it easier to locate individual catalog numbers in a sequence than by searching through 26 plates for a catalog number.

Under the current scientific name, we give the accepted common name only for North American species, and the fish family name for all species. Next, we provide the scientific name that was assigned to the illustration when the illustration was first published, and include the literature citation for that publication.

Other information is variable and, insofar as known, includes approximate date illustration was prepared (often based on ancillary references, e.g. the steamer *Albatross* station records for 1901–02 for the Hawaiian Islands, published in the Report of the Commissioner, U.S. Commission of Fish and Fisheries, Part 28, for year ending 30 June 1902 [1904], which provides dates of collection for specimens when authors cited only station data). Date of collection is the earliest possible date for preparation of an illustration, and date of publication of the illustration is the latest possible date for its preparation. CBH often indicated an actual date for preparation or indicated a year on the painting under his signature. With few exceptions, CBH and/or authors of the published plates usually only indicated total lengths (TL) of the specimen il-

lustrated, and usually only in inches. We present the data as indicated by the authors, and also approximate conversions to millimeters. If millimeters were used originally, we usually do not convert to inches. Other information we present includes CBH's indication when a particular illustration is based on more than one specimen; status of illustrated specimen as a holotype, if indicated or can be discerned from the publication; indication of media (ink, inkwash, watercolor, gouache (an opaque watercolor), oil, lead pencil) and, occasionally technique (stippling, ink lines) used in preparation of illustrations; price CBH was paid for the illustration (indicated on the illustration and based either on the illustrated length of the fish in inches, or the length and depth in square inches). We do not indicate the length of the figures as published; these are quite often different, and much reduced from the originals; none appear to have been published enlarged.

Thirty-two of the CBH illustrations (including some of the "previously framed illustrations") were included in the exhibit, "Drawn from the Sea: Art in the Service of Ichthyology" (abbreviated DFSA, henceforth), which was on display at the Smithsonian's National Museum of Natural History from Sept. 1985 to Mar. 1986. From 1987 to 1989, a reduced DFSA traveled to 16 museums, universities, and science centers, from Ontario to Texas and from Maine to California.¹⁴³ Only 12 of the 32 CBH illustrations that were included in the original DFSA were included in the 1987–89 version.

¹⁴³The exhibit was curated by VGS and featured a poster which included 11 fishes, two by CBH (P00979, P01499). The original exhibit included 200 illustrations representing the work of 21 artists. The traveling exhibit included only 80 of the 200 illustrations, but represented all 21 of the artists.

XX001–Plate 21 C

Epinephelus striatus (Bloch)

Nassau grouper, Family Serranidae

Illustration first published as: *Epinephelus striatus* by Evermann and Marsh (1900:plate 12).

Date illustrated: between Jan. and Apr. 1897, when CBH was in Key West, Fla.¹⁴⁴

Length of specimen: about 12 inches [about 305 mm]; length as illustrated, 9.12 inches [about 231 mm]

Remarks: original illustration lost; reproduced from published lithograph.

Remarks: original illustration lost; reproduced by us from published lithograph.

P00183–Plate 9 A

Alectrias benjamini Jordan and Snyder

Family Stichaeidae

Illustration first published as: *Alectrias benjamini* by Jordan and Snyder (1902b:fig. 16).

Date illustrated: before 26 Sept. 1902, based on date of publication.

XX002–Plate 20 C

Lutjanus jocu (Bloch and Scheneider).

Dog snapper, Family Lutjanidae

Illustration first published as: *Neomaenis jocu* by Evermann and Marsh (1900:plate 18).

Date illustrated: between 15 Jan. and 1 Apr. 1897 in Key West, Fla. (see XX001, footnote to date illustrated [not illustration]).

Length of specimen: about 11.5 inches [about 292 mm]; length as illustrated, 9.25 inches [235 mm].

¹⁴⁴Evermann and Marsh (1900:51) erroneously state that CBH was illustrating fishes in Key West "during the winter of 1897–98," i.e. about 21 Dec. 1897–21 Mar. 1898. We believe they intended their statement to read the winter of 1896–97. Evermann and Kendall (1900:38) correctly noted, "During the early part of 1897 Mr. Charles B. Hudson was in Key West engaged in painting for the U.S. Fish Commission the important food-fishes found at that place." They stated that the specimens CBH used for illustrations, and some others, were obtained and preserved in 1897, and they referred to them generally as "Hudson coll., 1897." CBH's handwritten information on several of his illustrations records them as having been done in Key West on various dates between 2 Jan. and 27 Mar. 1897. On one illustration, P08206 (*Caranx crysos*), however, CBH wrote "Apr. 1. 1898." Another possibility is that CBH made color sketches and did the final paintings in Washington, D.C.

Length of specimen: about 7.5 inches [190.5 mm], based on scale line accompanying original illustration; length as illustrated, 12.5 inches [about 318 mm].
Media: inked lines and stipples.

P00818–Plate 3 E

Moringua edwardsi (Jordan and Bollman)
Spaghetti eel, Family Moringuidae
Illustration apparently not published previously. Name on drawing is *Aphthalmichthys caribbeus* and represents the holotype, 270 mm TL, of *Aphthalmichthys caribbeus* Gill and Smith (1900:974), which was described in more detail, but not illustrated, by Evermann and Marsh (1900:71).

Length of specimen: The longest dimension of the eel in the original illustration is 10 inches [254 mm], but as the eel is drawn curved on itself, the original illustration is about twice the length of the actual specimen.

Media: includes ink wash and lead pencil, with some fine white gouache highlights.

P00979–Plate 19 C

Anguilla rostrata (Leseuer)
American eel, Family Anguillidae
Illustration first published as *Anguilla chrysypa* by Evermann and Marsh (1900:plate 1).

Date illustrated: drawn from life, 08 Dec. 1896, Woods Hole, Mass.

Length of specimen: 27 inches [about 686 mm]; length as illustrated, 9.25 inches [ca. 235 mm], but as the eel is drawn curved on itself, the original illustration is about two-thirds the length of the actual specimen.

Media: watercolor, fine pen and ink, white gouache highlights.

Remarks: This illustration has been reproduced in several publications and other venues subsequent to its original publication. It was included in both the initial and reduced versions of DFSA and on the poster for the exhibition. Previously framed.

P00980–Plate 19 E

Clupea harengus (Linnaeus)
Atlantic herring, Family Clupeidae
Illustration first published as *Clupea harengus* by Murdy et al. (1997:plate 5).

Date illustrated: drawn from dead specimen 16 Nov. 1896, Woods Hole, Mass.

Length of specimen: 13 inches [about 229 mm]; length as illustrated, 9 inches [about 229 mm].

Media: Watercolor and gouache.

Remarks: Previously framed.

P00981–Plate 23 E

Opsanus tau (Linnaeus)
Oyster toadfish, Family Batrachoididae

Illustration first published as *Opsanus tau* by Murdy et al. (1997:plate 15).

Date illustrated: drawn from life, 31 Oct. 1896, Woods Hole, Mass.

Length of specimen: 10.5 inches [about 267 mm]; Length as illustrated, 9 inches [about 229 mm].

Media: watercolor, gouache, ink.

Remarks: Previously framed. Also included in original DFSA.

P00982–Plate 23 D

Pollachius virens (Linnaeus)

Pollock, Family Gadidae

Illustration first published as *Pollachius virens* by Murdy et al. (1997:plate 16).

Date illustrated: drawn from life, 30 Nov. 1896, Woods Hole, Mass.

Length of specimen: 10.75 inches [273 mm]; length as illustrated, 9 inches [about 229 mm].

Media: watercolor, gouache, fine gray stippling on fins.

Remarks: Previously framed.

P00984–Plate 23 B

Merluccius bilinearis (Mitchill)

Silver hake, Family Merlucciidae

Illustration first published as *Merluccius bilinearis* by Murdy et al. (1997:plate 17).

Date illustrated: drawn from dead specimen, 11 Nov. 1896, Woods Hole, Mass.

Length of specimen: 17.625 inches [about 447.7 mm]; length as illustrated, 9 inches [about 229 mm].

Media: watercolor, much gouache, a little ink.

Remarks: Framed previously.

P00985–Plate 22 C

Fundulus majalis (Walbaum), male

Striped killifish, Family Fundulidae

Illustration first published as *Fundulus majalis* by Murdy et al. (1997:plate 18a).

Date illustrated: drawn from dead specimen, 17 Oct. 1896, Woods Hole, Mass.

Length of specimen and illustration: each 6 inches [about 152 mm].

Media: watercolor, gouache, black ink, and lead pencil.

P00986–Plate 22 D

Fundulus majalis (Walbaum), female

Striped killifish, Family Fundulidae

Illustration first published as *Fundulus majalis* by Murdy et al. (1997:plate 18b).

Date illustrated: drawn from dead specimen, 8 Oct. 1896, Woods Hole, Mass.

Length of specimen and illustration: each 6 inches [about 152 mm].

Media: watercolor, gouache, black ink, and lead pencil.

P00991—Plate 22 B

Mycteroperca microlepis (Goode and Bean)
Gag, Family Serranidae
Illustration first published as *Mycteroperca microlepis* by Murdy et al. (1997:plate 46).
Date illustrated: drawn from life, outline from one specimen, color from another, Feb. 1897, Key West, Fla.
Length of specimen: 16.75 inches [about 425 mm]; length as illustrated, 9.44 inches [about 240 mm].
Media: inkwash and gouache.
Remarks: Previously framed.

P00995—Plate 20 B

Lutjanus griseus (Linnaeus)
Gray snapper, Family Lutjanidae
Illustration first published as *Neomaenis griseus* by Evermann and Marsh (1900:plate 17).
Date illustrated: Drawn from life, 12 Mar. 1897, Key West, Fla., outline from one specimen, color from another.
Length of specimen: 12.44 inches [about 316 mm]; length as illustrated, 9.25 inches [about 235 mm].
Media: watercolor, gouache, ink in pupil.
Remarks: DFSA; previously framed. Illustration has been reproduced many times in various publications.

P00997—Plate 23 F

Cynoscion regalis (Bloch and Schneider)
Weakfish, Family Sciaenidae
Illustration first published as *Cynoscion regalis* by Murdy et al. (1997:plate 31).
Date illustrated: Unknown, data on illustration was destroyed when board was trimmed to fit in filing cabinet, probably drawn from fresh specimen at Woods Hole, Mass., during fall of 1896.
Length of specimen: unknown; length as illustrated, 9.25 inches [about 235 mm].
Media: watercolor with white gouache highlights.
Remarks: Previously framed.

P00999—Plate 24 D

Tautoga onitis (Linnaeus), female
Tautog, Family Labridae
Illustration first published as *Tautoga onitis* by Murdy et al. (1997:plate 44).
Date illustrated: drawn from life, 24 Sept. 1896, at Woods Hole, Mass.
Length of specimen: 11.88 inches [about 302 mm]; length as illustrated, 8.06 inches [about 205 mm].
Media: watercolor and gouache.
Remarks: Previously framed.

P01001—Plate 24 A

Scomber colias Gmelin
Atlantic chub mackerel, Family Scombridae
Illustration first published as *Scomber japonicus* by Murdy et al. (1997:plate 26).

Date illustrated: probably drawn from a fresh specimen although indicated as drawn from life, 15 Oct. 1896, Woods Hole, Mass.

Length of specimen: 10 inches [254 mm]; length of illustration, 9.06 inches [about 230 mm].

Media: watercolor and gouache.

Remarks: DFSA, also previously framed.

P01002—Plate 24 C

Scomberomorus maculatus (Mitchill)
Spanish mackerel, Family Scombridae
Illustration first published as *Scomberomorus maculatus* by Evermann and Marsh (1900:plate 6).
Date illustrated: Presumably illustrated from fresh specimen; date on illustration is 5 Sept. 1896, Cape Charles City, Va.
Length of specimen: 20 inches [508 mm]; length as illustrated, 9.06 inches [about 230 mm].
Media: watercolor and gouache.
Remarks: Previously framed.

P01003—Plate 22 E

Myoxocephalus octodecemspinosus (Mitchill)
Longhorn sculpin, Family Cottidae
Illustration first published as *Myoxocephalus octodecimspinosus* by Murdy et al. (1997:plate 21).
Date illustrated: presumably illustrated from fresh or live specimen; date on illustration is 6 Nov. 1896, Woods Hole, Mass.
Length of specimen: 13 inches [about 330 mm]; length as illustrated, 9 inches [about 229 mm].
Media: watercolor, ink, and gouache.
Remarks: DFSA. Previously framed.

P01008—Plate 22 F

Pseudopleuronectes americanus (Walbaum)
Winter flounder, Family Pleuronectidae
Illustration first published as *Pseudopleuronectes americanus* by Murdy et al. (1997:plate 49).
Date illustrated: drawn from life, 3 Oct. 1896, Woods Hole, Mass.
Length of specimen: 12.5 inches [about 318 mm]; length as illustrated, 9.12 inches [about 232 mm].
Media: watercolor and gouache.
Remarks: Previously framed.

P01035—Plate 14 E

Pomatomus saltatrix (Linnaeus)
Bluefish, Family Pomatomidae
Illustration first published as *Pomatomus saltatrix* by Murdy et al. (1997:plate 32).
Date illustrated: presumably based on fresh specimen, 14 Sept. 1896, Cape Charles City, Va.
Length of specimen: 17 inches [about 432 mm]; length as illustrated, 9.25 inches [about 235 mm].

Media: watercolor, gouache, ink, fine lines of ink.
Remarks: Previously framed.

P01039–Plate 14 C

Trachinotus carolinus (Linnaeus)
Florida pompano, Family Carangidae
Illustration first published as *Trachinotus carolinus* by Evermann and Marsh (1900:plate 10).
Date illustrated: presumably based on a fresh specimen, 3 Sept. 1896, Cape Charles City, Va.
Length of specimen: 17 inches [432 mm]; length as illustrated, 9.25 inches [235 mm].
Media: watercolor, gouache, ink around eye.
Remarks: Previously framed, DFSA.

P01115–Plate 23 C

Gadus morhua Linnaeus
Atlantic cod, Family Gadidae
Apparently published here for the first time.
Date illustrated: Based on a [fresh] dead specimen, 24 Oct. 1896, Woods Hole, Mass.
Length of specimen: 22 inches [539 mm]; length as illustrated, 9.06 inches [about 230 mm].
Media: watercolor and gouache.
Remarks: Previously framed.

P01276–Plate 26 B

Arothron hispidus (Linnaeus)
Stripebelly puffer, Family Tetraodontidae
Illustration first published as *Tetraodon hispidus* Linnaeus by Jordan and Evermann (1905: colored plate 66).
Date illustrated: painted from life, June 1901, Moanalua, Honolulu, Hawaii.
Length of specimen: 9 inches [about 229 mm]; length as illustrated, 6.25 inches [about 159 mm]; specimen is illustrated against a blue-green background.
Media: oil on board.
Remarks: This illustration has been republished in many different venues, often with the background removed. In the original publication, the background was modified from rectangular to an irregular ellipse. DFSA.

P01358–Plate 3 D

Bryconamericus eigenmanni (Evermann & Kendall)
Family Characidae
Illustration first published as *Astyanax eigenmanni* by Evermann and Kendall (1906:fig. 1), Based on the holotype, USNM 55570.
Date illustrated: during 1906, but before 25 July (date of publication).
Length of specimen: “about 3 inches [76 mm]”; length as illustrated, 8 inches [about 203 mm].
Media: Ink, gouache, lead pencil.

P01391–Plate 6 D

Stathmonotus stahli (Evermann & Marsh)
Family Chaenopsidae

Illustration first published as *Auchenistius stahli* by Evermann and Marsh (1900:fig. 102), based on the holotype, USNM 49372 (indicated on illustration), from Ponce, Puerto Rico.

Date illustrated: probably from preserved specimen, between 1 Feb. 1899, date collected, and 11 Sept. 1900, date Evermann indicated approval for publication of illustration.

Length of specimen: 1.2 inches [about 30.5 mm]; length as illustrated, 9 inches [about 229 mm].

Media: inked stipples.

Remarks: Hastings and Springer (1994:22) reported that the illustration is in error in indicating the presence of 42 dorsal-fin spines and 25 segmented anal-fin rays. The numbers are 41 and 24 respectively. As described and illustrated, the holotype, in poor condition, has only one anal-fin spine and it is not possible to determine if a second spine, normally present, was lost through damage. Specimens of *Stathmonotus* are frequently distorted, and the fin rays are difficult to count. Ichthyologists now x-ray specimens to avoid difficulties in counting the vertical fin elements, a technique not generally available to ichthyologists in 1900. Although Evermann and Marsh reported the number of dorsal-fin spines in agreement with the illustration, they correctly indicated 24 rays as the maximum number in the anal fin.

P01439–Plate 26 A

Rhinecanthus rectangulus (Bloch & Schneider)
Family Balistidae
Illustration first published as *Balistapus rectangulus* by Jordan and Evermann (1905: color plate 63).
Date illustrated: drawn from life in 1901 (probably June or July), Honolulu, Hawaii.
Length of specimen: 7.5 inches [about 191 mm]; length as illustrated, 7.75 inches [about 197 mm]; specimen is illustrated against a rectangular blue-green background, which was modified to a roughly oval area in the original publication.
Media: oil on board.

P01499–Plate 15 C

Oncorhynchus mykiss (Walbaum)
Rainbow trout, Family Salmonidae
Illustration first published as *Salmo gairdneri* by Bond (1985:185), advertising DFSA, and on the poster, which accompanied the exhibition. The illustration apparently, had not been published otherwise previously.
Date illustrated: 1912 (on illustration), from male specimen obtained May 1911, Scotts Creek, Santa Cruz Co., Calif. Color notes or study probably made at time of collection, or color based on other specimens.
Length of specimen: 23 inches [about 584 mm]; length as illustrated, 8.25 inches [about 210 mm].
Media: watercolor, gouache, dark spots are ink.

Remarks: DFSA. This was the last illustration of a fish that CBH prepared, ostensibly for publication. A similar illustration by CBH, dated 1910, was first published by Evermann and Bryant (1919) as *Salmo irideus*, a sea-run form. The original is framed and in an office of CDFG.

P01500–Plate 15 A

Oncorhynchus mykiss (Walbaum)

Rainbow trout, Family Salmonidae

Illustration first published as *Salmo gilberti* by Evermann (1906:plate 15), now considered to be a subspecies, *O. m. gilberti* (Jordan). Identical plates 1, 15, and 16 (our P01787, P01500, P04042) in Evermann (1906), which was published 16 May 1906, were also published and randomly inserted in Scott (1906). According to information on page 5 in Scott, that publication would have a date of on or after 1 Dec. 1906. We note also that Henshall's (1906a), report on the fishes of Montana, exact date not indicated, but a library stamp on cover reads "Received Apr 25 1906," was republished slightly modified as Henshall (1906b) in Scott (1906). We know of no subsequent mention of Henshall (1906b) in the ichthyological literature.

Date illustrated: from life, 1904; label on reverse side of illustration states collected 19 July 1904, Kern River, Calif.

Length of specimen: 18.25 inches [about 464 mm]; length as illustrated, 10.25 inches [about 260 mm].

Media: watercolor, gouache, dark spots are ink.

Remarks: Reproduced many times in different venues. DFSA. This is the rainbow trout of the Kern River (see remarks in P04042). A similar illustration by CBH, dated 1910, was first published by Evermann and Bryant (1919) as *Salmo irideus*, a stream form. The original is framed and in an office of CDFG.

P01528–Plate 24 E

Haemulon macrostomum Günther

Spanish grunt, Family Haemulidae

Illustration first published as *Haemulon album* by Evermann and Marsh (1900:plate 24).

Date illustrated: drawn from life, 27 Mar. 1897, Key West, Fla., but also indicated as outline from one specimen, color from two others.

Length of specimen: about 21 inches [about 533 mm]; length as illustrated, 9.25 inches [235 mm].

Media: watercolor, a little gouache.

Remarks: Previously framed. DFSA.

P01529–Plate 20 F

Ocyurus chrysurus (Bloch)

Yellowtail snapper, Family Lutjanidae

Illustration first published as *Ocyurus chrysurus* by Evermann and Marsh (1900:plate 23).

Date illustrated: 1897, Key West, Fla. Outline and color probably based on different specimens.

Length of specimen: 13 inches [about 330 mm]; length as illustrated, 9.25 inches [235 mm SL].

Media: watercolor, gouache, ink on eyeball.

Remarks: Previously framed. DFSA.

P01735–Plate 12 E

Bembradium roseum Gilbert

Family Bembridae

Illustration first published as *Bembradium roseus* by Gilbert (1905:plate 82), based on holotype, USNM 51617. Plate was erroneously labeled *roseus* (Gilbert, 1905:637, footnote).

Date illustrated: Between Mar. 1902 and 12 Feb. 1903, latter based on letter¹⁴⁵ from G. A. Clark, D. S. Jordan's secretary, to CBH, "Dr. Gilbert has given me the data for the enclosed bill for 6 drawings at \$10¹⁴⁶ each for work done for the Fish Commission in connection with his report on Hawaii. Will you kindly sign the vouchers and forward them to Washington." Five of the drawings are identifiable as P01735, P03128, P07188, P09228, P10047. The sixth is provided a spurious or tentative name, *Othonias exormus*, which applies to either P02327 or P02349 (CBH did seven drawings for Gilbert's study).

Length of specimen: according to Gilbert, 90 mm; according to label on illustration, 3.5 inches [88.9 mm]; length as illustrated, 9 inches [about 229 mm].

Media: inkwash, lead pencil, gouache highlights.

Remarks: CBH was paid \$0.50 per square inch for this illustration, which he recorded as 1.25 inches × 9 inches = \$5.62.

P01787–Plate 15 F

Oncorhynchus mykiss (Walbaum)

Rainbow trout [golden trout of the High Sierras], Family Salmonidae

Illustration first published as a half-tone and as *Salmo aguabonita* in Evermann (1905:106), based on holotype, USNM 53064. The original illustration was first reproduced in color as *Salmo roosevelti* in Evermann (1906:plate 1). See also discussion in section on first publication in P01500.

Date illustrated: drawn from life, 24 July 1904, Volcano Creek, High Sierras, Calif.

Length of specimen: 11.12 inches [about 283 mm]; length as illustrated, 9 inches [about 229 mm].

Media: watercolor, gouache, dark spots are ink.

¹⁴⁵Stanford University Libraries, Department of Special Collections, call number: SC 058; Box 6; Folder v. 12.

¹⁴⁶Stanford University Libraries, Department of Special Collections, call number: SC 058; Box 6; Folder v. 11. Letter from G. A. Clark to CBH, 28 Dec. 1902, "President Jordan has just received . . . a letter from [U.S. Fish] Commissioner Bowers approving of his recommendation that you be given a uniform rate of \$10 per drawing on the Hawaiian fishes, you to make the drawings large or small, according to the amount of detail to be put in."

Remarks: DFSA. This illustration has been republished in many different articles and venues; it represents *O. m. aguabonita* (Jordan), one of three closely related subspecies (see remarks in P04042).

P01788–Plate 16 B

Oncorhynchus clarkii (Richardson)

Cutthroat trout, Family Salmonidae

Apparently not published previously; representative of a now extinct subspecies, *Oncorhynchus clarkii henshawi* (Gill and Jordan).

Date illustrated: last week in June 1904, Lake Tahoe, Calif.

Outline based on a female; color based on four different male specimens.

Length of specimen: 14.12 inches [about 359 mm]; length as illustrated, 10.25 inches [about 260 mm].

Media: watercolor, gouache, dark spots are ink.

Remarks: It is unknown why CBH would have colored an outline based on a female specimen using males. Perhaps immature females and males have the same general color pattern. Considering their interest in salmonids, it might seem puzzling why D. S. Jordan or B. W. Evermann did not publish any of the CBH's three illustrations of the Lake Tahoe cutthroat trout (see also P04046 and P04047). We provide a possible explanation in the section of our introductory narrative entitled "From Lake Tahoe to the Golden Trout of the High Sierras."

P01840–Plate 5 C

Sargocentron ittodai (Jordan and Fowler)

Family Holocentridae

Illustration first published as *Holocentrus ittodai* by Jordan and Fowler (1902:fig. 4).

Date illustrated: between summer of 1900 (when collected) and 26 Nov. 1902 (when published), based on holotype, CAS-SU 7746.

Length of specimen: 4.94 inches [about 125 mm]; length as illustrated, 10 inches [254 mm].

Media: Oil.

Remarks: CBH indicated his charge for the drawing as "27/8" × 10" [= 28.75 square inches × \$0.50 =] \$14.37." DFSA.

P01919–Plate 14 A

Caranx crysos (Mitchill)

Blue runner, Family Carangidae

Illustration first published as *Caranx crysos* by Evermann and Marsh (1900:plate 9).

Date illustrated: 30 Mar. 1897, Key West, Fla., outline based on one specimen, color based on two [probably fresh and/or live] specimens.

Length of specimen: 14.5 inches [about 368 mm]; length as illustrated, 9.31 inches [about 237 mm].

Media: watercolor, a little gouache.

Remarks: Previously framed. DFSA.

P02213–Plate 2 B

Catostomus warnerensis (Snyder)

Warner sucker, Family Catostomidae

Illustration first published as *Catostomus warnerensis*, by

Snyder (1908:fig. 2), based on holotype USNM 55597.

Date illustrated: after 15 July 1904 (when collected) and before 28 Sept. 1908 (when published).

Length of specimen: 296 mm, provided by Snyder (but 11 inches [279 mm] according to CBH); length as illustrated, about 191 mm.

Media: much lead pencil, inkwash (?), minimal white gouache on fin rays, eye.

P02327–Plate 7 E

Callionymus caeruleonotatus Gilbert

Family Callionymidae

Illustration first published as *Callionymus caeruleonotatus* by Gilbert (1905:plate 89), based on holotype, USNM 51603.

Date illustrated: between 18 July 1902 (when collected) and 5 Aug. 1905 (when published).

Length of specimen: 86 mm TL, 49 mm SL (legend to plate gives "three inches," Gilbert, 1905:iii); length as illustrated, about 305 mm.

Media: inkwash, ink, white gouache, and lead pencil.

P02328–Plate 8 B

Callionymus enneactis Bleeker

Family Callionymidae

Illustration first published as *Callionymus calliste*, by Jordan and Fowler (1903a:fig. 8a).

Date illustrated: Probably between early summer and mid Oct. 1902.¹⁴⁷

Length of specimen: 3.88 inches [about 98.5 mm] or less; length as illustrated, about 13.94 inches [about 354 mm].

Media: inkwash, ink, white gouache, and lead pencil.

Remarks: CBH was paid \$0.50 per square inch for this illustration, for which he listed the measurements as 1.5 × 14 in. The measurements and amount paid, \$10.50, are written in the bottom margin of the illustration.

P02349–Plate 7 G

Callionymus decoratus (Gilbert)

Family Callionymidae

Illustration first published as *Calliurichthys decoratus* by Gilbert (1905:plate 90), based on holotype USNM 51609.

¹⁴⁷In letters from D. S. Jordan to CBH in Detroit, dated 27 Sept. and 11 Oct. 1902, Jordan importuned CBH for information on when he would finish the drawings of the callionymids, "When you get those drawings finished, kindly send them to Dr. [Marcus] Benjamin [publications editor at the Smithsonian Institution] ... and the paper will go to the press." Stanford University Libraries, Department of Special Collections, SC 058, D. S. Jordan, Series I-AA, Box 5, Folder v. 10. CBH responded to Jordan's letter of 27 Sept. on 6 Oct. 1902, "I have one drawing yet to make of *Callionymus*, and will send them to Dr. Benjamin in three or four days." Stanford University Libraries, Department of Special Collections, SC 058, Series I-A, D. S. Jordan, Box 33, Folder 329.

Date illustrated: between 9 July 1902 (when collected) and 5 Aug. 1905 (when published).

Length of specimen: Gilbert (1905:651) indicates 183 mm [TL = 7.2 in], 91 mm [SL = 3.6 in]; length according to the list of plates (Gilbert:1905:vii) is “6 inches” [about 152 mm]; length as illustrated, 12.75 inches [324 mm].

Media: inkwash and white gouache.

P02378–Plate 9 I

Chirolophis tarsodes (Jordan and Snyder)

Matcheek warbonnet, Family Stichaeidae

Illustration first published as *Bryostemma tarsodes* in Jordan and Gilbert (1902d:fig. 1), based on holotype, USNM 50570.

Date illustrated: probably about same time as CBH was illustrating Japanese stichaeids for Jordan and Snyder’s (1902b) study, between summer of 1900 and 4 Nov. 1902, when published. Specimen was collected 21 May 1890.

Length of specimen: “115 mm” [TL]; length as illustrated, 16 3/8 inches [416 mm].

Media: ink and inkwash; lead pencil on fin rays; opaque white gouache highlights.

Remarks: CBH indicated his charge as: “2³/₈” × 16³/₈” [= 38.9 square inches × \$0.50 =] \$19.45.”

P02388–Plate 8 E

Priolepis eugenius (Jordan and Evermann)

Family Gobiidae

Illustration first published as *Quisquilius eugenius* by Jordan and Evermann (1905:plate 57, but indicated in text, pages iii and 483, as *Gobiomorphus eugenius*), based on holotype USNM 50674, now apparently lost.

Date illustrated: between 1901 (when collected) and 29 July 1905 (when published).

Length of specimen: 1.4 inches [about 35.6 mm] according to Jordan and Evermann (1903:205), 2 inches [about 50.8 mm] according to Jordan and Evermann (1905:xv), or 1.4 inches [maximum for all specimens] according to Jordan and Evermann (1905:483); 1.4 inch TL appears to be correct based on a scale line, which appears to represent one-half inch, that accompanies the illustration. Length as illustrated, 12.12 inches [about 308 mm].

Media: lead pencil outline, inkwash and gouache.

P02473–Plate 13

Calamus bajonado (Bloch and Schneider)

Jolthead porgy, Sparidae

Illustration first published as *Calamus bajonado* by Evermann and Marsh (1900:plate 25).

Date illustrated: drawn from life, 18 Mar 1897, Key West, Fla.; outline based on one specimen, color based on two other specimens.

Length of specimen, about 11.62 inches [about 295 mm]; length as illustrated, 9 inches [about 229 mm].

Media: watercolor, gouache, lead pencil (see enlarged sections plate 13).

Remarks: Previously framed. DFSA.

P02933–Plate 25 C

Oxycheilinus bimaculatus (Valenciennes)

Family Labridae

Illustration first published as *Cheilinus bimaculatus*, by Jordan and Evermann (1905: color plate 38). Probably drawn from life.

Date illustrated: summer of 1901.

Length of specimen: 5 inches [127 mm]; length as illustrated, 4.5 inches [about 107 mm].

Media: oil on Academy Board, DVOE & Co. This is one of the few CBH scientific illustrations on which the trade name of the supporting surface of the media is available. In a letter from CBH to Hugh M. Smith (NARA, Record Group 106, Smithsonian Institution, Hugh M. Smith, Box 5), dated 29 Dec. 1902, Palo Alto, Calif., CBH indicated he was working on the “Hawaiian collection” of the “Fish Commission” and requested Smith to provide “Whatman Water-color Board, NOT surface,” which was unavailable in California. “It is of course understood that I will use it only for Fish Commission work.” An imprint on the letter indicates Smith responded to the letter on 10 Jan. 1903, but we did not locate a copy; however, he wrote on CBH’s letter requesting a Mr. Pritchard to send CBH two dozen sheets. Underneath this, in a different handwriting, “1 Doz. Boards 10 × 14” sent by mail Jan. 17–03.”

Remarks: This illustration, like many of the colored plates of Jordan and Evermann’s “Fishes of Hawaii,” has been reproduced many different times, usually as postcards by the Waikiki and Steinhart aquariums. In all reproductions, including the original, the gray background is paler than in the actual painting, and the colors of the fish made considerably more brilliant.

P03128–Plate 12 B

Chrionema squamiceps Gilbert

Family Percophidae

Illustration first published as *Chrionema squamiceps* by Gilbert (1905:plate 86), based on holotype, USNM 51635.

Date illustrated: between 23 July 1902 (when collected) and 5 Aug 1905 (when published).

Length of specimen: 2.4 inches [61 mm], but Gilbert (1905:vii) indicates 2.5 inches; length as illustrated, 11 inches [about 279 mm].

Media: inkwash, ink, white gouache, lead pencil.

P03198–Plate 10 C

Cirrhilabrus jordani Snyder

Family Labridae

First published as *Cirrhilabrus jordani* by Snyder (1902: plate 10, Figure 18), based on holotype, male (USNM

50878; other specimens from same collection are females).

Date illustrated: between 14 Apr. 1902 (when collected) and 19 Jan. 1904 (when published).

Length of specimen: 3.3 inches [83.8 mm]; length as illustrated, 9.5 inches [about 241 mm].

Media: lead pencil, inkwash, and white gouache.

P03214–Plate 26 D

Cirrhitis pinnulatus (Forster)

Family Cirrhitidae

Illustration first published as *Cirrhites marmoratus* by Jordan and Evermann (1905: color plate 70).

Date illustrated: painted from live specimen, summer 1901, Hawaii.

Length of specimen: 7 inches [about 178 mm]; length as illustrated, 6 inches [about 152 mm].

Media: oil; see also media under P02933.

Remarks: Gray-green background of original decreased in intensity and brightness of fish increased in publication.

P03239–Plate 12 G

Citharichthys arenaceus Evermann and Marsh

Sand whiff, Family Paralichthyidae

Illustration first published as *Citharichthys arenaceus* by Evermann and Marsh (1900:fig. 106). Based on the holotype (USNM 49536, not 49526 as published).

Date illustrated: between 2 Jan. and 21 Feb. 1899 (when collected) and 10 Sept. 1900 (when B. W. Evermann approved illustration).

Length of specimen: 162 mm TL; length as illustrated, 172 mm.

Media: Inked stipples.

P03416–Plate 6 E

Coralliozetus cardonae Evermann and Marsh

Family Chaenopsidae

Illustration first published as *Coralliozetus cardonae* by Evermann and Marsh (1900:fig. 103), based on the holotype, USNM 49377.

Date illustrated: between 1 Feb. 1899 (when collected) and 11 Sept. 1900 (when B. W. Evermann approved illustration).

Length of specimen: 1 inch [25.4 mm]; length as illustrated, 8 inches (203 mm).

Media: inked stipples.

P03444–Plate 18 C

Coregonus clupeaformis (Mitchill)

Lake whitefish, Family Salmonidae

Illustration first published as *Coregonus albus* by Jordan and Evermann (1911:plate 6).

Date illustrated: 19 June 1906, probably from fresh specimen, Lake Michigan, off Berrien County, Mich.; outline from one specimen, color from another specimen.

Length of specimen: 17.25 inches [about 438 mm]; length as illustrated, 8.5 inches [216 mm].

Media: watercolor, gouache, some lead pencil.

P03445–Plate 18 D

Coregonus artedi Lesueur

Cisco, Family Salmonidae

Illustration first published as *Leucichthys sisco huronius* by Jordan and Evermann (1911:plate 2).

Date illustrated: 1 Aug. 1906, probably from fresh specimen, Lake Michigan, off Berrien County, Mich.; outline based on one specimen, color based on two others.

Length of specimen: 12.62 inches [about 321 mm]; length as illustrated, 9.5 inches [about 241 mm].

Media: watercolor, yellow and pink gouache, lead pencil, and ink.

P03462–Plate 19 A

Coregonus species?

Family Salmonidae

Illustration first published as *Leucichthys hoyi* in Jordan and Evermann (1911:plate 5). Plate 5 is not *hoyi* according to Koelz (1929:377, 449), but he did not identify the fish illustrated in plate 5 in his publication, in which he did identify all the species illustrated in the other plates.

Date illustrated: 25 June 1906, probably from fresh specimen, Lake Michigan, off Berrien County, Mich.; outline based on one specimen, color on three others.

Length of specimen: 14.75 inches [about 375 mm]; length as illustrated, 8.5 inches [216 mm].

Media: watercolor, gouache, some lead pencil.

P03484–Plate 19 B

Prosopium cylindraceum (Pennant)

Round whitefish, Family Salmonidae

Illustration first published as *Coregonus quadrilateralis* by Jordan and Evermann (1911:plate 7).

Date illustrated: 20 Sept. 1906, Lake Huron, off St. Ignace, Mich.; outline based on one specimen, color based on four other specimens.

Length of specimen: 18.19 inches [about 462 mm]; length as illustrated, 8.5 inches [about 216 mm].

Media: watercolor, gouache, some lead pencil.

P03497–Plate 10 B

Coris aygula Lacepède

Family Labridae

Illustration first published as *Coris aygula* by Jordan and Snyder (1902a:fig. 9).

Date illustrated: Based on information in letter¹⁴⁸ from CBH to G. A. Clark (D. S. Jordan's secretary), this is

¹⁴⁸Stanford University Libraries, Department of Special Collections, SC 058 I-A, D. S. Jordan, Box 30, Folder 303, "I signed and forwarded the vouchers which you sent me, and also two others received from Washington two or three days ago, for the three labrid fishes ..."

one of three labrid illustrations (the others are P09474, P14692) CBH completed shortly before 18 Jan. 1902, possibly including late 1901. All three were first published in Jordan and Snyder (1902a), dated 2 May 1902.

Length of specimen: uncertain; length as illustrated, 11 inches [about 279 mm].

Media: inked lines and stipples.

P03505–Plate 25 A

Coris gaimard (Quoy & Gaimard)

Family Labridae

Illustration first published as *Julis pulcherrima* by Jordan and Evermann (1905: color plate 27).

Date illustrated: apparently painted from life, summer of 1901, Hawaii.

Length of specimen: 8.5 inches [about 208 mm]; length as illustrated about the same.

Media: oil on academy board.

Remarks: This illustration has been published in several different venues. In all the reproductions, the color of the fish and the background have been reproduced much brighter than in the original.

P03513–Plate 25 B

Coris venusta Vaillant and Sauvage

Family Labridae

Illustration first published as *Hemicoris venusta* by Jordan and Evermann (1905: color plate 31).

Date illustrated: Apparently painted from life, summer of 1901, Hawaii.

Length of specimen: 5.75 inches [about 146 mm]; length as illustrated, same.

Media: oil on Academy Board.

Remarks: This illustration has been reproduced in several different venues.

P03674–Plate 11 A

Cottiusculus schmidti Jordan and Starks

Family Cottidae

Illustration first published as *Cottiusculus schmidti* by Jordan and Starks (1904:fig. 30).

Date illustrated: probably early 1903 (see P11241, date illustrated).

Length of specimen: unknown, but based on the description it is less than 92 mm [TL or SL?]. If the scale line with illustration equals one-half inch (CBH's usual denomination, specimen was about 50 mm TL, or if it equals one inch, which he also often used, the specimen was about 100 mm TL); length as illustrated, 12.25 inches [about 311 mm].

Media: inkwash, lead pencil, white gouache highlights on fins.

Remarks: CBH indicated his charge as, " $2\frac{1}{8} \times 12\frac{1}{4} = 26\frac{1}{32}$ [square inches \times \$0.50] = \$13."

P03723–Plate 11 B

Cottus bairdii Girard

Mottled sculpin, Family Cottidae

Unpublished previously, although remark concerning reduction for printing is written on illustration. Name written on illustration: *Cottus spilotus*. *Uranidea spilota* Cope is a junior synonym of *Cottus bairdii*. Locality: Fish Creek, Milwaukee, Wisc.

Date illustrated: after 1905.

Length of specimen: 2.88 inches [about 73 mm]; length as illustrated, 8 inches [about 203 mm].

Media: inkwash, lead pencil, white gouache highlights.

Remarks: Initials E. T. S. [Ernest Thompson Seton] on reverse. See discussion of illustrations drawn for Seton.

P03728–Plate 1 D

Couesius plumbeus (Agassiz)

Lake chub, Family Cyprinidae

Unpublished previously, although remark concerning reduction for printing is written on illustration. Name written on illustration is *Couesius dissimilis*.

Date illustrated: 1905.

Length of specimen: 3.3 inches [about 84 mm]; length as illustrated, 8 inches [about 203 mm].

Media: inkwash, lead pencil, white gouache.

Remarks: Initials E. T. S. [Ernest Thompson Seton] written on reverse side of illustration (see discussion of illustrations drawn for Seton). Specimen appears to be part of USNM 125198, which contains five specimens collected by C. J. Eigenmann in Medicine Hat, Alberta, in 1892. The catalog entry contains the remark "U. S. B. F. [United States Bureau of Fisheries] no. 149 drawn by Hudson for [Ernest Thompson] Seton."

P04008–Plate 25 F

Dendrochirus barberi (Steindachner)

Family Scorpaenidae

Illustration first published as *Dendrochirus hudsoni* by Jordan and Evermann (1905: color plate 73), based on the holotype, USNM 50652. Jordan and Evermann (1905:465) treated the species as *D. barberi* (a junior synonym) in their text, but did not change the name in the legend to the plate.

Date illustrated: painted from life, summer of 1901, Hawaii.

Length of specimen: 1.8 inches [45.7 mm]; length as illustrated, 6 inches [about 153 mm].

Media: oil.

P04040–Plate 16 F

Oncorhynchus tshawytscha (Walbaum)

Chinook salmon, Family Salmonidae

Illustration apparently not published previously.

Date illustrated on or about 16 July 1907, based on a male specimen taken in Monterey Bay, Calif.

Length of specimen: 29.62 inches [727 mm]; length as illustrated, 8.75 inches [222 mm].

Media: watercolor, gouache, inkspots.

Remarks: DFSA. A very similar painting, attributed to CBH, was published as the frontispiece to California Fish and Game, vol. 3, no. 3, 1917. According to K. Hashagen, former editor of the journal (in litt., 20 Mar 2008), the painting is framed, but (surprisingly for a CBH color illustration) unsigned and undated, and is held by the CDFG, Sacramento. Possibly a mat obscures CBH's signature and date. We know of no subsequent publication of this painting.

P04042–Plate 15 D

Oncorhynchus mykiss whitei (Evermann)

Rainbow trout, Family Salmonidae

Illustration first published as *Salmo whitei*, holotype, USNM 53065 by Evermann (1906:plate 16). It represents a valid subspecies of *O. mykiss*, *O. m. whitei*. See also discussion in section on first publication in P01500.

Date illustrated: early July 1904, south fork of Kaweah River, High Sierras, Calif.

Length of holotype: 7.75 inches [197 mm]; length as illustrated, 8 inches [203 mm].

Media: watercolor, gouache, spots are ink.

Remarks: R. J. Behnke (email, 12 July 08 to VGS), foremost authority on the systematics of North American salmon and trout, recognizes three subspecies of *O. mykiss* that are more closely related to each other than to any other form of *O. mykiss*: *O. m. whitei* (Plate 15 D) of the Little Kern River; *O. m. aguabonita* (Jordan) of the South Fork of the Kern River and Volcano Creek (Plate 15 E, F); and *O. m. gilberti*, “Rainbow trout” of Kern River (Plate 15 A).

P04043–Plate 15 E

Oncorhynchus mykiss aguabonita (Jordan)

Rainbow trout [golden trout of the High Sierras], Family Salmonidae

Illustration apparently first and, possibly, only previously published as *Salmo aqua-bonita* on a postcard by the Steinhart Aquarium of the California Academy of Sciences; date uncertain, but may have been issued at the opening of the aquarium in 1923. The original illustration and a postcard are present in the USNM Division of Fishes files.

Date illustrated: between 21 Feb. and 6 Apr. 1907, based on year date under CBH's signature on painting and information from Claire H. Brett.¹⁴⁹ A label on the illustration in CBH's handwriting indicates that the color is from a CBH field sketch, which was based on a specimen collected on 23 July 1904. On this date, the

Evermann expedition to Mt. Whitney was at the South Fork of the Kern River (Evermann, 1906:25). The specimen on which the outline was based may have been a painting made by A. H. Baldwin, although that cannot be established with certainty (see also footnote mentioned above). Information on catalog number and associated locality information indicated on CBH's label conflict with catalog records. Determining which specimens were used as a basis for the illustration is complex, if not impossible.

Length of specimen: 7 inches [178 mm]; length as illustrated, 9.5 inches [241 mm].

Media: watercolor, gouache, ink spots.

Remarks: This illustration depicts another example of *O. mykiss aguabonita* (compare with Plate 15 F, P01787).

P04046–Plate 16 A

Oncorhynchus clarkii henshawi (Gill & Jordan)

Cutthroat trout, Family Salmonidae

Illustration first published as *Salmo clarkii henshawi* by Ono et al. (1983:plate 5, female); publication, otherwise, only by Behnke (1986:18, lower figure). Form is now considered representative of an extinct subspecies, *Onchorhynchus clarkii henshawi* (Gill and Jordan).

Date illustrated: from life, June 1904, Lake Tahoe; outline based on one specimen, color based on three others. Female color pattern.

Length of specimen: 13.88 inches [about 352 mm]; length as illustrated, 10 inches [254 mm].

Media: watercolor, gouache, ink spots.

Remarks: DFSA. Considering their interest in salmonids, it might seem puzzling why D. S. Jordan or B. W. Evermann did not publish any of the CBH's three Lake Tahoe illustrations (see also P01788 and P04047). We provide a possible explanation in the section of our introductory narrative entitled “From Lake Tahoe to the Golden Trout of the High Sierras.”

P04047–Plate 16 C

Oncorhynchus clarkii (Richardson)

Cutthroat trout, Family Salmonidae

Illustration first published as *Salmo clarkii henshawi* by Ono et al. (1983:plate 5, male); publication, otherwise, only by Behnke (1986:18, upper figure). Form is now considered representative of an extinct subspecies, *Onchorhynchus clarkii henshawi* (Gill and Jordan).

Date illustrated: from life, 14 June 1904, Lake Tahoe, outline based on one specimen, color based on two others. Male color pattern.

Length of specimen: 16.75 inches [about 426 mm]; length as illustrated, 10.12 inches [257 mm].

Media: watercolor, gouache, ink spots.

P04054–Plate 15 B

Oncorhynchus mykiss (Walbaum)

Rainbow trout, Family Salmonidae

¹⁴⁹Her unpublished manuscript chronology, “Charles Bradford Hudson” mentions letter of 21 Feb. 1907 from B. W. Evermann requesting this painting, and enclosing a painting in black and white made by [Albertus H.] Baldwin [from a presumably preserved specimen] from the South Fork of the Kern River, and CBH's original painting [P04043] from Volcano Creek, requesting CBH to make a colored painting based on the Baldwin illustration.

Illustration apparently first (and only) published as *Salmo shasta* on a postcard issued by the Steinhart Aquarium of the California Academy of Sciences; date uncertain, but may have been issued at opening of the aquarium in 1923. The original illustration and a postcard are present in the USNM Division of Fishes files.

Date illustrated: 1911 based on date under CBH's signature. Specimen was a male collected in Oct. 1910 from fish bred in Sisson Hatchery, Calif. General coloring from male taken from McCloud River, Calif; markings from hatchery male.

Length of specimen: 12.33 inches [313 mm]; length as illustrated, 8.5 inches [216 mm].

Media: watercolor, gouache, ink spots.

Remarks: A similar painting signed by CBH and dated 1910, was first published by Evermann and Bryant (1919:plate opposite page 114), as *Salmo irideus*. The painting is framed and in the possession of the CDFG, Sacramento.

P04057–Plate 16 E

Salmo salar Linnaeus

Atlantic salmon, Family Salmonidae

Illustration first published as *Salmo sebago* by Kendall (1918:plate 40; breeding male).

Date illustrated: "Finished Oct. 12, 1904." Rangely stream, Oquassoc, Maine.

Length of specimen: outline based on specimen 19 inches [483 mm] long; length as illustrated, 9.5 inches [241 mm].

Media: watercolor, gouache, ink spots.

Remarks: DFSA.

P04058–Plate 16 D

Salmo salar Linnaeus

Atlantic salmon, Family Salmonidae

Illustration first published as *Salmo sebago*, by Kendall (1918:plate 40; nearly ripe female).

Date illustrated: "Painting finished Nov. 3, 1904." Rangely Lake stream, Oquassoc, Maine.

Length of specimen: CBH indicated length of specimen no. 01355, as "outline 16³/₄" [476 mm] long," and on a second label, as "19 inches [483 mm] long," and further indicated that the color was from a specimen, "01358, 23¹/₂ [570 mm] long." Length as illustrated, 9.5 inches [241 mm].

Media: watercolor, gouache, ink spots.

P04059–Plate 17 A

Salvelinus alpinus (Linnaeus)

Arctic char, Family Salmonidae

Illustration first published as *Salvelinus oquassa* by Kendall (1918:plate 41).

Date illustrated: 10–18 Oct. 1904, breeding female, Rangely stream, Oquassoc, Maine.

Length of specimen: CBH indicated length of specimen

used for outline as 15 inches [381 mm] on one label and on another as 15.2 inches [386 mm]. Color was from specimen 16 7/8 inches [429 mm] long. Length as published, 9.5 inches [241 mm].

Media: watercolor, gouache, some lead pencil.

P04061–Plate 17 E

Salvelinus aureolus Bean

Sunapee trout, Family Salmonidae

Illustration first published as "White Trout [*Salvelinus aureolus*] by Kendall (1914:plate 9), indicated as "Breeding Female."

Date illustrated: outline based on one specimen, 21 Nov. 1904, color from another, 26 Nov. 1904, past breeding female; Sunapee Lake, N.H.

Length of specimen used for outline: 17.5 inches [about 445 mm]; specimen used for color, 17.125 inches [435 mm]

Media: watercolor, gouache, ink.

P04062–Plate 17 F

Salvelinus aureolus Bean

Sunapee trout, Family Salmonidae

Illustration first published as "White Trout [*Salvelinus aureolus*] by Kendall (1914:plate 8), indicated as "Breeding Male."

Date illustrated: outline based on one specimen, 19 Nov. 1904, color based on another specimen, 20 Nov. 1904; Sunapee Lake, N.H.

Length of specimen used for outline: 15.5 inches [394 mm]; specimen used for color, "16⁶/₈" inches [about 424 mm]; length as illustrated, 9.75 inches [248 mm].

Media: watercolor, gouache, ink.

P04064–Plate 18 B

Salvelinus namaycush (Walbaum)

Lake trout, Family Salmonidae

Illustration first published as *Cristivomer namaycush* by Jordan and Evermann (1911:plate 1).

Date illustrated: outline based on specimen from Lake Michigan off Berrien Co, Mich., 18 July 1906; color from specimens taken on shoals off St. Ignace, Mich. (Lake Huron) 24 Sept. 1906.

Length of specimen used for outline: 25.5 inches [648 mm]; length as illustrated, 8.5 inches [140 mm].

Media: watercolor, gouache, lead pencil.

P04070–Plate 17 B

Salvelinus alpinus (Linnaeus)

Arctic char, Family Salmonidae

Illustration apparently not published previously. Name on illustration, *Salvelinus marstoni* [Garman = *S. alpinus*].

Date illustrated: outline apparently based on specimen drawn 2 Dec. 1904; [color] from another specimen; finished 4 Dec 1904. Specimens were "Young, about 3

years old. Hatched from eggs of wild fish, at St. Johnsbury, Vt.”

Length of specimen used from outline: 12.25 inches [311 mm]; specimen apparently used for color, 13.75 inches [349 mm] long. Length as illustrated, 9.5 inches [241 mm].

Media: watercolor, gouache, ink, some lead pencil.

Remarks: DFSA.

P04071–Plate 17 C

Salvelinus alpinus (Linnaeus)

Arctic char, Family Salmonidae

Illustration apparently not published previously. Name on illustration, *Salvelinus marstoni* [Garman = *S. alpinus*].

Date illustrated: outline drawn 12 Nov. 1904, based on one specimen; color based on another specimen; illustration finished 16 Nov. 1904. Male past breeding. Fish were from U.S. fish hatchery, St. Johnsbury, Vt., transferred to Nashua, N.H., where painting was done.

Length of specimen used for outline: 14.5 inches [368 mm]; male specimen used for color, 15.2 inches [386 mm]; length as illustrated, 9.5 inches [241 mm].

Media: watercolor, gouache, ink, some lead pencil.

Remarks: DFSA.

P04072–Plate 17 D

Salvelinus alpinus (Linnaeus)

Arctic char, Family Salmonidae

Illustration apparently not published previously. Name on illustration, *Salvelinus marstoni* [Garman = *S. alpinus*].

Date illustrated: outline drawn 29 Nov. 1904, based on one specimen, color based on another specimen, finished 1 Dec. 1904. Female past breeding. Fish were from U.S. fish hatchery, [St. Johnsbury, Vt.] transferred to Nashua, N.H., where painting was done.

Length of specimen used for outline: 15.2 inches [386 mm]; female specimen used for color, 13 inches [330 mm]; length as illustrated, 9.5 inches [241 mm].

Media: Watercolor, gouache, ink, some lead pencil.

Remarks: DFSA.

P04073–Plate 18 A

Salvelinus fontinalis (Mitchell)

Brook trout, Family Salmonidae

Illustration first published as *Salvelinus fontinalis* by Kendall (1918:plate 42, female).

Date illustrated: unknown; probably 1904 based on other Rangeley Lakes illustrations; disposition of original illustration unknown.

Length of specimen: 16.5 inches [419 mm]; length as illustrated, unknown, but probably about nine inches [229 mm], in keeping with other CBH Rangeley Lakes illustrations.

Media: probably watercolor, gouache.

Remarks: CBH illustrated a male of this species in 1910, probably based on a specimen from California. The painting, which is framed, is in a CDFG office, Sacramento. It was first published as the frontispiece, unassociated with an article, in a 1917 issue of California Fish and Game, vol. 3, no. 1.

P04163–Plate 14 D

Decapterus punctatus (Cuvier)

Round scad, Family Carangidae

Illustration first published as *Decapterus punctatus* by Evermann and Marsh (1900:plate 8).

Date illustrated: 10 Oct. 1896, based on dead specimen from Woods Hole, Mass.

Length of specimen: 5.69 inches [about 144 mm]; length as illustrated, 5.75 inches [146 mm].

Media: watercolor, white gouache, a little lead pencil and ink.

Remarks: Previously framed.

P04272–Plate 6 C

Neoclinus bryope (Jordan and Snyder)

Family Chaenopsidae

Illustration first published as *Zacalles bryope* by Jordan and Snyder (1902b:fig. 3).

Date illustrated: after summer of 1900 (when collected) and before 26 Sept. 1902 (when published).

Length of specimen: 2.75 inches [about 70 mm]; length as illustrated, 16 inches [about 406 mm].

Media: inked lines and stipples.

Remarks: CBH figured his charge as, “2” × 16” [= 32 square inches, @ 0.50 =] \$16.00.”

P04361–Plate 9 J

Sicyopterus stimpsoni (Gill)

Family Gobiidae

Illustration first published as *Vitraria clarescens* by Jordan and Evermann (1905: black and white plate 60), based on holotype, USNM 50655.

Date illustrated: between the summer of 1901 (when collected) and 29 July 1905 (when published).

Length of holotype: about 1.2 inches [about 30.5 mm]; length as illustrated, 16.5 inches [419 mm].

Media: inkwash and white gouache.

Remarks: This figure was reproduced from the published figure in Jordan and Evermann (1905: black and white plate 60). The original figure is present in the USNM illustration files.

P04503–Plate 8 D

Upeneus arge Jordan and Evermann

Family Mullidae

Illustration first published as *Upeneus arge* by Jordan and Evermann (1905: black and white plate 39), who, we believe, erroneously indicated that it was based on the “type” [= holotype], USNM 50667, Honolulu, Hawaii

(see discussion below on length of specimen), which was given the field number 02999.

Date illustrated: between summer of 1901 (when collected) and 29 July 1905 (when published).

Length of specimen: Jordan and Evermann (1903:188) wrote that the type was 8.5 inches long. Handwriting (B. W. Evermann's?) on the margin of the illustration includes, in order, the species name, "type" [which someone has crossed out], "Honolulu," "10.25," and [a few illegible marks]". The only other information on the illustration is a label in someone else's handwriting stating "type" number as "3954, Field Col[lection?]. Mus. [which Jordan and Evermann, 1903:188, indicated was the final disposition of a cotype 10.25 inches long, with the field number 03795]. Based on interpretation of CBH's undenominated scale line on the illustration as representing 0.5 inch (which it represents in many of his illustrations), we calculated that the specimen, which was illustrated as 9 inches long, to be 10.28 inches long, well within a reasonable margin of error. We conclude that Jordan and Evermann (1905) were in error in indicating that this illustration was based on the holotype.

Media: inkwash, gouache, and lead pencil.

P04554–Plate 6 A

Enneapterygius theostomus (Jordan and Snyder)

Family Tripterygiidae

Illustration first published as *Tripterygion theostoma* by Jordan and Snyder (1902b:fig. 1).

Date illustrated: after summer of 1900 (when collected) and before 26 Sept. 1902 (when published).

Length of specimen: 2.55 inches [about 65 mm]; length as illustrated, 11 inches [about 280 mm].

Media: inked lines and stipples.

P04556–Plate 6 B

Springerichthys bapturnus (Jordan & Snyder)

Family Tripterygiidae

Illustration first published as *Tripergion [Tripterygion] bapturnum* by Jordan and Snyder (1902:fig. 2), based on the holotype, CAS-SU 7066.

Date illustrated: after summer of 1900 (when collected) and before 26 Sept. 1902 (when published).

Length of specimen: 2 inches [50 mm]; length as illustrated, 13 inches [about 330 mm].

Media: inked lines and stipples; fine white gouache used to interrupt inked lines of fin rays and to indicate segmented fin-rays.

P04925–Plate 25 E

Thalassoma duperrey (Quoy & Gaimard)

Family Labridae

Illustration first published as *Thalassoma duperrey* by Jordan and Evermann (1905: color plate 35).

Date illustrated: from a live or fresh specimen, summer 1901.

Length of specimen: 6.75 inches [about 171 mm]; length as illustrated, 7 inches [178 mm].

Media: oil.

P05171–Plate 14 F

Sander vitreus (Mitchill)

Walleye, Family Percidae

Illustration apparently not published previously.

Date illustrated: 1905, apparently from life or a fresh specimen, Georgian Bay, Ontario. Indicated as collected by CBH.

Length of specimen: 18.88 inches [479 mm]; length as illustrated, 8 inches [203 mm].

Media: watercolor and gouache.

Remarks: Initials E. T. S. [Ernest Thompson Seton] on reverse side of illustration (see discussion of illustrations drawn for Seton).

P05663–Plate 4 E

Scuticaria tigrina (Lesson)

Tiger reef eel, Family Muraenidae

Illustration first published as *Scuticaria tigrina* by Jordan and Evermann (1905: black and white plate 22).

Date illustrated: between summer of 1901, when collected, and 10 Nov. 1902, when noted as having been received from D. S. Jordan (see remarks under P11719).

Length of specimen: 40 inches (about 1.02 m); length as illustrated, 24 inches [588 mm], includes curvature.

Media: Inkwash and a little white gouache.

Remarks: CBH figured his charge: " $7/8" \times 24"$ [= 21 square inches, at \$0.50 per square inch =] \$10.50"

P05890–Plate 24 B

Scomber scombrus (Linnaeus)

Atlantic mackerel, Family Scombridae

Apparently not published previously.

Date illustrated: drawn from life, 15 Oct. 1896, Woods Hole, Mass.

Length of specimen: unknown; length as illustrated, 9.25 inches [about 235 mm].

Media: watercolor and gouache.

Remarks: Previously framed.

P05934–Plate 11 C

Porocottus allisi (Jordan and Starks)

Family Cottidae

Illustration first published as *Crossias allisi* by Jordan and Starks (1904:fig. 28), probably based on holotype, CAS-SU 7711

Date illustrated: probably early 1903 (see P11241, date illustrated).

Length of holotype published as 77 mm (length about 73 mm, based on scale line accompanying illustration; paratypes all indicated as 68 mm or shorter; see also P11241, length of specimen); length as illustrated, 12 inches [about 305 mm].

Media: inkwash, gouache, and lead pencil.

Remarks: CBH figured his charge as: " $2\frac{7}{8}'' \times 12'' = 34.5$ sq. [$@ 0.50$] = \$17.25."

P06626–Plate 2 C

Gila bicolor (Girard)

Tui chub, Family Cyprinidae

Illustration first published as *Rutilus columbianus* by Snyder (1908:fig. 4, the holotype, USNM 55595).

Date illustrated: between 20 July 1904 (based on date of collection) and before 28 Sept. 1908 (based on date of publication).

Length of specimen: 136 mm TL (we remeasured at 132 mm, but part of caudal fin is missing); length as illustrated, about 191 mm.

Media: inkwash, gouache, some lead pencil.

P06627–Plate 2 D

Gila bicolor (Girard)

Tui chub, Family Cyprinidae

Illustration first published as *Rutilus oregonensis* by Snyder (1908:fig. 3, the holotype, USNM 55596).

Date illustrated: after July 1904 (based on date of collection) and before 28 Sept. 1908 (based on date of publication).

Length of specimen: 202 TL (we remeasured and agree); length as illustrated, about 197 mm.

Media: inkwash, gouache, some pencil.

P06885–Plate 12 D

Neomerinthe beanorum (Evermann and Marsh)

Family Scorpaenidae

Illustration first published as *Pontinus beanorum* by Evermann and Marsh (1900:fig. 85), based on the holotype, USNM 49534.

Date illustrated: between 13 Jan. 1899 (when collected) and 11 Sept. 1900 (when B. W. Evermann approved the illustration; as entered on illustration).

Length of specimen: 5.5 inches [about 140 mm]; length as illustrated, 10.81 inches [about 275 mm].

Media: ink stipples.

P07159–Plate 21 E

Epinephelus itajara (Lichtenstein)

Goliath grouper, Family Serranidae

Illustration not previously published. Label on illustration reads, "*Promicrops guttatus*, juv.," an old, erroneous identification, but clearly this is a juvenile of *E. itajara*.

Date illustrated: unknown, but undoubtedly done in Key West, Fla., 1897, based on other CBH Key West illustrations. Other evidence is that the illustration shows stains of having been framed, which we found only on illustrations of fishes done at Key West and Woods Hole, and the species does not occur at Woods Hole, but does occur at Key West (see also remarks, below).

Length of specimen unknown; length as illustrated, 9.12 inches [231 mm].

Media: watercolor and inkwash.

Remarks: Previously framed. Although CBH did not sign and date any of his colored paintings done in Key West, this illustration is unusual in not bearing a Bureau of Fisheries label attributing it to CBH or including a date and place where the specimen was obtained. A handwritten number, "1223 color" on the reverse of the illustration corresponds to a number for this species in the U.S. Fish Commission Tag Number Ledger, which states that CBH collected this specimen, and the only place where CBH worked and where the species occurs was Key West.

P07188–Plate 12 C

Pteropsaron incisum Gilbert

Family Percophidae

Illustration first published as *Pteropsaron incisum*, by Gilbert (1905:plate 87), who indicated it was based on the holotype, but it is actually based on a paratype, USNM 51659.

Date illustrated: between Mar.–Aug. 1902 and 12 Feb. 1903 (see P01735, date illustrated).

Length of specimen: 2 inches [about 50 mm] based on scale line on illustration; length as illustrated, about 305 mm.

Media: inkwash, white gouache, and lead pencil.

P07220–Plate 11 D

Pseudoblennius zonostigma Jordan and Starks

Family Cottidae

Illustration first published as *Pseudoblennius zonostigma* by Jordan and Starks (1904:fig. 35), based on either the holotype, CAS SU 7718, or one of the two paratypes, USNM 50927. See discussion in Length of specimen section (below).

Date illustrated: probably early 1903 (see P11241, date illustrated).

Length of specimen: Jordan and Starks had three specimens. The holotype, CAS-SU 7718, stated as being 105 mm (Jordan almost always used TL), and two paratypes, one, 120 mm, probably also at Stanford, and USNM 50927, which we measured as 108 mm TL. When CBH entered a factor with his scale lines, it was either 0.5 inch [12.7 mm] or 1 inch [25.4 mm]. Using these factors resulted in our finding that the illustration represented a specimen that was either 106.7 mm or 213 mm TL. Although our conversion factor for 0.5 inch places the length of the illustrated specimen slightly closer in length to the USNM specimen than to the holotype, we think that a margin of error makes it impossible to attribute the drawing to either the holotype or USNM paratype (see also P11241, length of specimen); treating the scale as 1 inch indicates a size much larger than any of the three specimens. Length as illustrated, 10.7 inches [about 272 mm].

Media: Inkwash, white gouache, and lead pencil.

Remarks: CBH indicated his charge as: “ $2\frac{3}{8}'' \times 10\frac{3}{4}''$ [=] 25.53 sq. in [=] \$0.50 [=] \$12.76.”

P07225–Plate 10 D

Pseudocheilinus evanidus Jordan and Evermann

Family Labridae

Illustration first published as *Pseudocheilinus evanidus* by Jordan and Evermann (1905: black and white plate 43), based on holotype, USNM 50678.

Date illustrated: 1903 (indicated by CBH on label pasted to illustration).

Length of holotype; 3.25 inches [82.6 mm]; length as illustrated, 9.5 inches [241 mm]. Jordan and Evermann (1903:192, 1905:317) did not give the length of the holotype. But in the list of illustrations (Jordan and Evermann (1905:xiv), they gave the length as 3.25 inches, and indicate the specimen was collected by themselves. In both the 1903 and 1905 descriptions, however, they indicate that Mr. Sindo is the collector. The data in the illustration list was apparently taken from CBH's label, which gives the length and implies that Jordan and Evermann were the collectors. CBH was probably unaware of the information in the descriptions and Jordan and Evermann (1905), considering other errors in their illustration lists, did not read, or did not have, the opportunity to read, proof on their publication.

Media: Inkwash, white gouache, lead pencil.

P07351–Plate 6 H

Pungitius pungitius (Linnaeus)

Ninespine stickleback, Family Gasterosteidae

Unpublished previously, although remark concerning reduction for printing is written on illustration. Name on illustration is *Pygosteus pungitius*.

Date illustrated: 1905.

Length of specimen: 1.83 inches [about 46.5 mm]; length as illustrated, 8 inches [about 203 mm].

Media: Inkwash, a little white gouache, lead pencil.

Remarks: Initials E. T. S. [Ernest Thompson Seton] on reverse side of illustration (see discussion of illustrations drawn for Seton).

P07976–Plate 23 A

Urophycis tenuis (Mitchill)

White hake, Family Phycidae

Apparently not published previously.

Date illustrated: drawn from life, 25 Nov. 1896. Woods Hole, Mass.

Length of specimen: 12.12 inches [308 mm]; length as illustrated, 9 inches [229 mm].

Media: watercolor, gouache, ink.

Remarks: Previously framed.

P08158–Plate 1 A

Pimephales promelas (Rafinesque)

Fathead minnow, Family Cyprinidae

Unpublished previously, although remark concerning reduction for printing is written on illustration. Name on illustration is *Pimephales promelas*.

Date illustrated: probably 1905 (see remarks under P03728).

Length of specimen: 2.75 inches [70 mm]; length as illustrated, 8.0 inches [about 203 mm].

Media: inkwash, lead pencil, white gouache highlights.

Remarks: Initials E. T. S. [Ernest Thompson Seton] on reverse side of illustration (see discussion of illustrations for Seton).

P08206–Plate 14 B

Caranx hippos (Linnaeus)

Crevalle jack, Family Carangidae

Illustration first published as *Caranx hippos* by Murdy et al. (1997:plate 23).

Date illustrated: drawn from life 1 Apr. 1897 (erroneously indicated as 1898 on illustration; see footnote under XX001), outline from one specimen and color from another (latter now cataloged as 169929 in the USNM fish collection); Key West, Fla.

Length of specimen: specimen used for outline 12.62 inches [321 mm]; length as illustrated, 9.25 inches [235 mm].

Media: watercolor, gouache, and ink.

Remarks: Previously framed.

P08510–Plate 12 F

Aulotrachichthys prosthemi (Jordan & Fowler)

Family Trachichthyidae

Illustration first published as *Paratrachichthys prosthemi* by Jordan and Fowler (1902:fig. 1), based on holotype, USNM 50575.

Date illustrated: between 16 May 1900 (when collected) and 25 Nov. 1902 (when published).

Length of holotype: 2.4375 inches [61.9 mm]; length as illustrated, 10.125 inches [257 mm].

Media: gouache and some lead pencil.

Remarks: CBH indicated his charge as “ $2\frac{7}{8}'' \times 10''$ [= 28.75 square inches @ \$0.50 =] \$14.37.”

P08657–Plate 26 F

Paracirrhites arcatus (Cuvier)

Family Cirrhitidae

Illustration first published as *Paracirrhites arcatus*, by Jordan and Evermann (1905: color plate 69).

Date illustrated: from live specimen, summer of 1901, Honolulu, Hawaii.

Length of specimen: 4.12 inches [105 mm]; length as illustrated, same.

Media: Oil on board.

Remarks: P08657 and P08658 are on the same piece of board. CBH was probably trying to conserve materials.

P08658–Plate 26 E

Cirrhitops fasciatus (Bennett)

Family Cirrhitidae

Illustration first published as *Paracirrhites cinctus* by Jordan and Evermann (1905: color plate 68).
Date illustrated: from live specimen, summer of 1901, Honolulu, Hawaii.
Length of specimen: about 3.8 inches [about 96 mm]; length as illustrated, same.
Media: Oil on board.
Remarks: P08658 and P08657 are on the same piece of board. CBH was probably trying to conserve materials.

P08659–Plate 26 C

Paracirrhites forsteri (Schneider)
Family Cirrhitidae
Illustration first published as *Paracirrhites forsteri* by Jordan and Evermann (1905: color plate 67).
Date illustrated: from life, summer of 1901.
Length of specimen: 7 inches [178 mm]; length as illustrated, 6 inches [153 mm].
Media: Oil on board.

P08697–Plate 11 E

Ocynectes maschalis Jordan and Starks
Family Cottidae
Illustration first published as *Ocynectes maschalis* by Jordan and Starks (1904:fig. 34), probably based on holotype, CAS-SU 7717.
Date illustrated: probably early 1903 (see P11341, date illustrated).
Length of specimen: holotype published as 55 mm, not exceeded by any paratype. Based on scale line accompanying illustration we calculated the length as 53.3 mm, within a small range of error (see also P11241, length of specimen). Length as illustrated, 12 inches (305 mm).
Media: inkwash and white gouache.
Remarks: CBH calculated his charge as: “ $2\frac{1}{2}'' \times 12'' = 30$ sq. in (@ \$0.50 [=] \$15.00.”

P08787–Plate 19 D

Osmerus mordax (Mitchill)
Rainbow smelt, Family Osmeridae
Apparently not published previously.
Date illustrated: backside of illustration, in CBH’s handwriting, “Woods Hole, Mass., Sept. 30, 1896. Taken on sandy or gravel bottom nearly white. Chas. B. Hudson.”
Length of specimen: not provided no scale line included; length as illustrated, 9 inches [229 mm].
Media: watercolor and ink; backside of illustration board bears stamp: Fred A. Schmidt, No. 504 9th Street, Washington, D.C., Artists’ & Draughtmen’s Materials & Stationers.
Remarks: Previously framed.

P08806–Plate 5 E

Ostichthys japonicus (Cuvier)
Family Holocentridae

Illustration first published as *Ostichthys japonicus* by Jordan and Fowler (1902:fig. 2).
Date illustrated: between end of summer 1900 (when collected) and 25 Nov. 1902 (when published).
Length of specimen: 13.25 inches [about 325 mm]; length as illustrated, 10.5 inches [about 267 mm].
Media: inked lines and stipples; fine white gouache used to break ink lines of fin rays into tiny segments.

P08857–Plate 4 B

Oncorhynchus keta (Walbaum)
Chum salmon, Family Salmonidae
Illustration first published as *Oncorhynchus keta* by Jordan and Snyder (1902c:fig. 2).
Date illustrated: between end of summer, 1900 (when collected) and 25 Mar. 1902 (when published).
Length of specimen: unknown; length as illustrated, 11 inches (about 279 mm).
Media: inked lines and stipples.
Remarks: CBH indicated his charge as, “ $2\frac{7}{8}'' \times 11'' = 31.62$ square inches \times \$0.50] = [\$]15.80.”

P09228–Plate 12 A

Chironema chryseres Gilbert
Family Percophidae
Illustration first published as *Chironema chryseres* by Gilbert (1905:plate 85) based on the holotype, USNM 51655.
Date illustrated: between Mar.–Aug. 1902 and 12 Feb. 1903 (see P01735, date illustrated).
Length of holotype: 206 mm; length as illustrated, 308 mm.
Media: inkwash, ink, white gouache, some lead pencil.

P09407–Plate 1 C

Notropis atherinoides (Rafinesque)
Emerald shiner, Family Cyprinidae
Unpublished previously, although remark concerning reduction for printing is written on illustration. Name on illustration is *Notropis atherinoides*.
Date illustrated: 1905.
Length of specimen: 2.78 inches [about 73 mm]; length as illustrated, 8 inches [about 203 mm].
Media: inkwash, lead pencil, white gouache highlights.
Remarks: Initials E. T. S. [Ernest Thompson Seton] on reverse side of illustration (see discussion of illustrations drawn for Seton).

P09413–Plate 1 F

Notropis bifrenatus (Cope)
Bridle shiner, Family Cyprinidae
Unpublished previously, although remark concerning reduction for printing is written on illustration. Name on illustration is *Notropis cayuga*.
Date illustrated: probably 1905 (see remarks under P03728).

Length of specimen: 1.81 inches [about 46 mm]; length as illustrated, 8 inches [about 203 mm].

Media: inkwash, lead pencil, white gouache highlights.

Remarks: Initials E. T. S. [Ernest Thompson Seton] on reverse (see discussion of illustrations drawn for Seton).

P09436–Plate 2 A

Notropis blennioides (Girard)

River shiner, Family Cyprinidae

Unpublished previously, although remark concerning reduction for printing is written on illustration. Name on illustration is *Notropis jejunus*.

Date illustrated: 1905.

Length of specimen: 2.31 inches [about 58.7 mm]; length as illustrated, 8 inches [about 203 mm].

Media: inkwash, lead pencil, white gouache.

Remarks: Initials E. T. S. [Ernest Thompson Seton] on reverse side of illustration (see discussion of illustrations drawn for Seton).

P09474–Plate 10 E

Halichoeres bleekeri Steindachner and Döderlein

Family Labridae

Illustration first published as *Halichoeres tremebundus* by Jordan and Snyder (1902a:fig. 8).

Date illustrated: between late 1901 and 18 Jan. 1902 (see P03497, date illustrated).

Length of specimen: uncertain, about 3.85 inches [97.8 mm] if scale line accompanying figure represents one inch (CBH gave inch measurements in those instances where he indicated what his scale lines represented). Illustration could represent holotype (CAS-SU 6853), which Jordan and Snyder stated was about 100 mm. Length as illustrated, 10 inches (254 mm).

Media: inked lines and stipples.

Remarks: CBH indicated his charge as: “2¹/₈” × 10” [= 21.25 inches @ \$0.50 =] \$10.62.”

P09548–Plate 5 B

Myripristis amaena (Castelnau)

Family Holocentridae

Illustration first published as *Myripristis argyromus* by Jordan and Evermann (1905:black and white plate 27). The illustration is purportedly based on the type (= holotype; USNM 50631, 9.5 inches long, from Hilo, Hawaii), and the caption to plate 27 also indicates it portrays the type. CBH's label on the drawing, however, indicates it is based on a different specimen (a cotype = paratype, 9 inches long, from Honolulu). To complicate matters, in the list of black and white plates (Jordan and Evermann, 1905:xiii), plate 27 is indicated as based on the holotype, 9 inches long, collected at Honolulu by Jordan and Evermann in 1902 [sic]. It can be determined from information in Jordan and Evermann (1903), which includes the original

description of *M. argyromus*, that the specimen CBH painted was collected by Jordan and Evermann in Honolulu in 1901.

Date illustrated: either this specimen, or P09557 (both were collected in 1901 in Hawaii) was completed about 21 Apr. 1903, according to CBH letter of that date to D. S. Jordan¹⁵⁰; otherwise (for either specimen), between summer of 1901 (when collected) and 29 July 1905 (when published).

Length of specimen: 9 inches [about 229 mm]; length as illustrated: 9.5 inches [about 241 mm]

Media: inkwash and white gouache.

P09557–Plate 5 A

Myripristis amaena (Castelnau)

Family Holocentridae

Illustration first published as *Myripristis symmetricus* by Jordan and Evermann (1905: black and white plate 26), based on the holotype, USNM 50632.

Date illustrated: see date illustrated under P09548.

Length of specimen: 5.5 inches [about 140 mm]; length as illustrated, 8.25 inches [about 210 mm].

Media: inkwash and white gouache.

P09660–Plate 22 A

Mycteroperca bonaci (Poey)

Black grouper, Family Serranidae

Illustration apparently not published previously.

Date illustrated: “Drawn from life,” Key West, Fla., 21 Jan. 1897.

Length of specimen: 27.5 inches [about 700 mm]; length as illustrated, 9.24 inches [about 235 mm].

Media: watercolor and gouache.

Remarks: Outline [measurement, details] based on one specimen and color taken from two others. This appears to indicate that the specimen from which the outline was taken was not alive and, perhaps, that the two specimens from which the color was taken, were held in aquaria. We suspect that making measurements and fin-ray counts on a live specimen about 700 mm in length would present considerable difficulty. Illustration shows evidence of having been framed.

P09663–Plate 4 A

Mycteroperca venenosa (Linnaeus)

Yellowfin grouper, Family Serranidae

Illustration originally published as *Mycteroperca bowersi* by Evermann and Marsh (1900:fig. 45), based on holotype, USNM 49530.

Date illustrated: between 10 Feb. 1899 (when collected) and 15 Sept. 1900 (when B. W. Evermann approved illustration).

¹⁵⁰“I have finished *Myripristis* and will send it to Dr. Evermann tomorrow morning.” Stanford University Libraries, Department of Special Collections, SC 058, D. S. Jordan, Series I-A, Box 36, Folder 357.

Length of holotype: 21.5 inches [546 mm]; length as illustrated, 9.25 inches [235 mm].
Media: inked lines and stipples.

P09681–Plate 21 F

Mycteroperca venenosa (Linnaeus)
Yellowfin grouper, Family Serranidae
Illustration apparently not published previously.
Date illustrated: 27 Jan. 1897, Key West, Fla. Outline indicated from one specimen; possibly another used for color.
Length of specimen: 22.62 inches [575 mm]; length as illustrated, 9.5 inches [241 mm].
Media: watercolor, a little gouache and lead pencil.
Remarks: Previously framed. DFSA.

P10047–Plate 7 B

Draconetta xenica (Jordan and Fowler)
Family Draconettidae
Illustration first published as *Draconetta hawaiiensis* by Gilbert (1905:plate 91), based on holotype, USNM 51633.
Date illustrated: probably between early summer and mid Oct. 1902 (see P02328, date illustrated).
Length of holotype: 2 inches [50.8 mm]; length as illustrated, 10 inches (254 mm).
Media: inkwash, lead pencil, white gouache highlights.
Remarks: CBH indicated his charge as “1¹/₈” × 10” [= 11.25 square inches × \$0.50 =] \$5.62.”

P10048–Plate 7 A

Draconetta xenica Jordan and Fowler
Family Draconettidae
Illustration first published as *Draconetta xenica* by Jordan and Fowler (1903a:fig. 1), based on the holotype, USNM 50816.
Date illustrated probably between early summer and mid Oct. 1902 (see P02328).
Length of holotype: “2 9/16 inches,” according to Jordan and Fowler (1903a:940) or “2¹/₂ inches,” according to Jordan and Fowler (1903a:941); therefore about 63.5 mm; length as illustrated, 14 inches [about 356 mm].
Media: inkwash, lead pencil, white gouache.
Remarks: CBH indicated his charge as “1⁷/₈” × 14” [= 26.25 square inches =] \$12.25.” Inasmuch as he was receiving \$0.50 per square inch, he should have charged \$13.12.

P10343–Plate 6 F

Emblemaria pandionis (Evermann & Marsh)
Sailfin blenny, Family Chaenopsidae
Illustration first published as *Emblemaria pandionis* by Evermann and Marsh (1900:fig. 104), based on the holotype, USNM 49535.
Date illustrated: between 08 Feb. 1899 (when collected) and 29 Dec. 1900 (when published).

Length of specimen: 1.5 inches [38.1 mm]; length as illustrated, 8.75 inches [about 222 mm].
Media: inked stipples.

P10448–Plate 21 A

Epinephelus adscensionis (Osbeck)
Rock hind, Family Serranidae
Illustration first published as *Epinephelus adscensionis* by Evermann and Marsh (1900:plate 11).
Date illustrated: 1897, Key West, Fla.
Length of specimen: 13.5 inches [343 mm]; length as illustrated, 9.44 inches [240 mm].
Media: watercolor and a little gouache.
Remarks: Previously framed. DFSA.

P10475–Plate 21 B

Epinephelus guttatus (Linnaeus)
Red hind, Family Serranidae
Illustration first published as *Epinephelus maculosus* by Evermann and Marsh (1900:plate 13); text, however, used *Epinephelus guttatus* when listing the species and referring to the plate.
Date illustrated: 1897, Key West, Fla.
Length of specimen: 14.5 inches [368 mm]; length as illustrated, 9.5 inches [241 mm].
Media: watercolor and a little gouache.
Remarks: Previously framed. DFSA.

P10482–Plate 21 D

Epinephelus morio (Valenciennes)
Red grouper, Family Serranidae
Illustration first published as *Epinephelus morio* by Evermann and Marsh (1900:plate 14).
Date illustrated: Drawn from life, 15 Jan 1897, Key West, Fla. Outline based on one specimen, color from another.
Length of specimen used for outline: 17.75 inches [451 mm]; length as illustrated, 9.69 inches [246 mm].
Media: watercolor and a little gouache.
Remarks: Previously framed.

P10567–Plate 9 C

Ernogrammus hexagrammus (Schlegel)
Family Stichaeidae
Illustration first published as *Ernogrammus hexagrammus*, by Jordan and Snyder (1902b:fig. 23).
Date illustrated: between summer of 1900 (when collected) and 26 Sept. 1902 (when published).
Length of specimen: about 4.72 inches [120 mm]; length as illustrated, 16 inches [406 mm].
Media: inked lines and stipples.
Remarks: CBH indicated his charge as: “2⁵/₈” × 16” [= 42 square inches × \$0.50 =] \$21.00.”

P11005–Plate 6 G

Mugil cephalus Linnaeus
Striped mullet, Family Mugilidae

Illustration apparently published here for the first time, although the words “reduce to” without indication of how much is written on front of illustration. Specimen indicated as Stanford Univ. 6223 [= CAS-SU 6223], which was collected in Jan. 1896. Name on illustration: *Mugil rammelsbergi*.

Date illustrated: After 1 Jan. 1896 [when collected], probably after 1901, when CBH first moved to California.

Length of specimen: 7.75 inches [about 197 mm]; length as illustrated, 7.9 inches [about 202 mm]

Media: inkwash and white gouache.

P11040–Plate 1 B

Moxostoma anisurum (Rafinesque)

Silver redbhorse, Family Catostomidae

Unpublished previously, although remark concerning reduction for printing is written on illustration.

Date illustrated: 1905. Slough of Mississippi River at Muscatine, La.

Length of specimen: 6.15 inches [about 154 mm]; length as illustrated, 9 inches [about 229 mm].

Media: inkwash and lead pencil.

Remarks: Initials E. T. S. [Ernest Thompson Seton] on reverse side of illustration (see discussion of illustrations drawn for Seton).

P11183–Plate 4 D

Pseudobagrus ransonnetii Steindachner

Family Bagridae

Illustration first published as *Fluvidraco ransonnetii* by Jordan and Fowler (1903b:fig. 1).

Date illustrated: Between summer of 1900 (when collected) and 12/5/02 (when “B. A. B.” [= Barton A. Bean¹⁵¹], assistant curator, USNM, approved payment for the illustration. Springer (2001: last paragraph on page 46 et seq.) noted that an author could ask that someone at the museum oversee production of an illustration to accompany a publication scheduled for the Proceedings of the United States National Museum. In the cited example, it was also B. A. Bean who oversaw the preparation of an illustration of a fish.

Length of specimen: unknown; length as illustrated, 9 inches [about 229 mm].

Media: inkwash and a little white gouache on Windsor & Newton’s Watercolour Sketching Boards, “NOT” Surface.

Remarks: CBH indicated his charge: “size 1¾ × 9 = [15.75 × \$0.50] \$7.89.”

¹⁵¹Bean (1860–1947), joined the Smithsonian’s National Museum as a clerk in 1881. He rose to the position of Assistant Curator of Fishes in 1890, which position he held until he retired in 1932. He also worked with the U.S. Fish Commission, which was closely associated with the Smithsonian (information from R. V. Szary, Historical Note in Record Unit 7224, Barton A. Bean Papers, Smithsonian Institution Archives).

P11241–Plate 11 F

Furcina osimae Jordan and Starks

Family Cottidae

Illustration first published as *Furcina osimae* by Jordan and Starks (1904:fig. 33), probably based on holotype, CAS-SU 7716 (see length of specimen).

Date illustrated: probably early 1903, based on letters dated 13 and 27 Mar. and 28 Apr. 1903¹⁵² from David Starr Jordan in California, to CBH in Detroit, Mich. By this time Jordan must have had faith in CBH’s ability as he asked that the drawings be sent directly to B. W. Evermann in Washington [without Jordan’s checking].

Length of specimen: based on CBH’s scale line accompanying the figure, we calculated the length of the illustrated specimen as 75.5 mm TL. Jordan and Starks gave the length of the holotype as 77 mm. The 2% difference between our calculation and the length given by Jordan and Starks is probably within a reasonable range of error; however, as there were several paratypes we are uncertain if the specimen is a paratype or the holotype. Length as illustrated is 12 inches [305 mm]. In a letter dated 25 Mar. 1901¹⁵³, from David Starr Jordan in California, to CBH in Washington, D. C., Jordan stated that he liked to make descriptions and figures from the same specimens. For that reason, we are inclined to believe the illustrated specimen is the holotype.

Media: inkwash and gouache.

Remarks: CBH indicated his charge as: “2⁵/₈” × 12” [=] 31.5 [square inches @ \$0.50 = \$15.75.”

P11561–Plate 8 F

Gobionellus oceanicus (Pallas)

Highfin goby, Family Gobiidae

Illustration first published as *Gobius bayamonensis* by Evermann and Marsh (1900:fig. 90), based on the holotype, USNM 49365 [CBH indicated 49367 on illustration].

Date illustrated: between Jan. 1899, when obtained at a fish market in Puerto Rico, and 11 Sept. 1900, when B. W. Evermann approved payment for, or publication of, illustration (information entered on illustration).

Length of specimen: 9 inches [289 mm]; length as illustrated, 9 inches.

Media: inked lines and stipples.

P11628–Plate 25 D

Gomphosus varius Lacepède

Family Labridae

Illustration first published as *Gomphosus tricolor* by Jordan and Evermann (1905: color plate 36).

Date illustrated: summer of 1901, from live or fresh specimen, Hawaii.

¹⁵²Stanford University Libraries, Department of Special Collections, SC 058, D. S. Jordan, ser. IAA, Box 7, Folder v. 13.

¹⁵³Stanford University Libraries, Department of Special Collections, SC 058, D. S. Jordan, ser. IAA, Box 2, Folder v. 3.

Length of specimen: about 8 inches [about 203 mm]; length as illustrated, 6 inches [about 152 mm].

Media: oil on "Academy Board."

Remarks: DFSA. Published version has intensity of gray-green background considerably decreased. Subsequent to original publication, image appeared on an early 1900's booklet of Hawaiian fishes and repeatedly on postcards, issued during various years by the Waikiki Aquarium.

P11719–Plate 3 C

Gymnomuraena zebra (Shaw)

Zebra moray, Family Muraenidae

Illustration first published as *Echidna zebra* by Jordan and Evermann (1905: black and white plate 20).

Date illustrated: between summer, 1901, when collected, and 10 Nov. 1902 (see remarks, below).

Length of specimen: 23.5 inches [ca. 597 mm]; length as illustrated (specimen is drawn curved on itself), about the same.

Media: inkwash and a little white gouache in eye.

Remarks: DFSA. On the reverse side of illustration is a note that "4 washed paintings of Hawaiian Fishes. By Mr. Hudson rec'd from Dr. Jordan Nov 10, 1902." These refer to this illustration and three other eel species (see P05663, P11787, P11800). CBH figured his charge: "1³/₁₆" × 23¹/₂" [= 27.9 square inches, at \$0.50 per square inch =] \$13.95."

P11787–Plate 3 A

Gymnothorax pictus (Ahl)

Family Muraenidae

Illustration first published as *Gymnothorax pictus* by Jordan and Evermann (1905: black and white plate 19).

Date illustrated: between summer, 1901, when collected, and 10 Nov. 1902, when delivered to D. S. Jordan (see remarks under P11719).

Length of specimen: 27.5 inches [about 699 mm]; length as illustrated, 22.5 inches [about 572 mm], specimen is drawn curved on itself.

Media: inkwash, a little gouache.

Remarks: CBH figured his charge as "1⁹/₁₆" × 22¹/₂ inches" [= 28.4 square inches], for which he claimed \$15.00, or a little more than the \$0.50 per square inch he usually charged.

P11800–Plate 3 B

Gymnothorax flavimarginatus (Ruppell)

Family Muraenidae

Illustration first published as *Gymnothorax thallassopterus* by Jenkins (1903:plate 2; based on holotype, USNM 50619); republished by Jordan and Evermann (1905: black and white plate 17). Mistakenly recataloged as USNM 51073.

Date illustrated: between summer 1901, when collected, and 10 Nov. 1902, when delivered to D. S. Jordan (see remarks under P11719).

Length of specimen: 23 inches [about 584 mm]; length as illustrated, about 11.62 inches [about 295 mm]; specimen drawn curved on itself.

Media: inkwash and gouache.

Remarks: CBH indicate his charge as: "1³/₈" × 21" [= 28.87 square inches @ \$0.50] = \$14.43."

P11829–Plate 20 E

Lutjanus synagris (Linnaeus)

Lane snapper, Family Lutjanidae

Illustration apparently not published previously.

Date illustrated: 4 Mar. 1897, Key West, Fla. Drawn from life. Outline based on one specimen, color based on another.

Length of specimen: 14.5 inches [368 mm]; length as illustrated, 9.3 inches [about 237 mm].

Media: watercolor, considerable gouache.

Remarks: Previously framed. Evermann and Marsh (1900: plate 22) used A. H. Baldwin's color painting of *L. synagris*, done in Puerto Rico, rather than CBH's done in Florida. It is understandable that they preferred a painting of a species from the locality of their research over one from a distant locality. Scientifically, as well as aesthetically, CBH's illustration is superior. Evermann and Marsh, however, used CBH's inked illustration (P15116) of this species, based on what they thought was a different, new Puerto Rican species.

P12848–Plate 2 F

Hiodon alosoides (Rafinesque)

Goldeye, Family Hiodontidae

First published as *Hiodon alosoides* by Coker (1930: fig. 8).

Date illustrated: 1905.

Length of specimen: 7 inches [about 178 mm]; length as illustrated, 8 inches [about 203 mm].

Media: inkwash, white gouache, and lead pencil.

Remarks: Initials E. T. S. [Ernest Thompson Seton] on reverse side of illustration (see discussion of illustrations drawn for Seton).

P13124–Plate 5 F

Sargocentron ensifer (Jordan & Evermann)

Family Holocentridae

Illustration first published as *Holocentrus ensifer* by Jordan and Evermann (1905: black and white plate 28). The plate legend indicates the illustration is based on the "type," which Jordan and Evermann (1903:177) designated as USNM 50637, with the field number 03448. A label on the reverse of the illustration, however, indicates that the drawing is based on a specimen (cotype) at the Museum of Comparative Zoology (MCZ) with the U.S. Fish Commission field number 04931. This field number, as are those of all the other type specimens, is included on page 58 in a U.S. Fish Commission catalog

book deposited at USNM.¹⁵⁴ The catalog lists the USNM specimen as being 9 inches long and the MCZ specimen as being 8 inches long (K. Hartel, MCZ, measured the TL of that specimen, which is missing a portion of the caudal fin, as about 7.5 inches). Lengths for all the specimens on the page, including the type and eight cotypes of *H. ensifer* and specimens of other holocentrids, are given in whole or whole plus quarters of an inch. Based on the scale line CBH included with the illustration, we calculated the length of the illustrated specimen to be about 8.27 inches, which we consider within an acceptable range of mechanical error or shrinkage. We conclude that the illustration is based on the MCZ specimen and not the USNM holotype.

Jordan and Evermann (1903:177) gave the length of the USNM holotype as 6 inches, and Jordan and Evermann (1905:xiii), inexplicably gave the length as 6.25 inches, in either case, much shorter than the 9 inches indicated for the specimen in the Fish Commission ledger. At our request, J. T. Williams measured the holotype as having a TL of 225 mm [8.8 inches], very close to the length given in the ledger. USNM has one other specimen of the nine in the type series, USNM 126155 (field number 04929), which was originally part of the defunct Fish Commission collection. Jordan and Evermann (1903:177) give the length of this specimen as 8.75 inches and J. T. Williams measured it as 8.5 inches, again within a reasonable margin of mechanical error or shrinkage.

We presume that the erroneous 6-inch measurements of the two specimens were the result of a printer's error. In the early 1900's, tables, such as that in which Jordan and Evermann (1903:177) listed their specimens and associated data, were probably hand-set from loose type. In the type font in which their table was set, a 6 was merely a 9 upside down. Mistakes were probably common, and would have necessitated careful proofing to correct.

Date illustrated: between summer of 1901 (when collected) and 29 July 1905 (when published).

Media: inkwash, white gouache, lead pencil.

P13132—Plate 5 D

Sargocentron xantherythrum (Jordan and Evermann)

Family Holocentridae

Probably not published previously. Name on label on illustration in unknown handwriting indicates: *Holocentrus ensifer*; *xantherythrus* is written above *ensifer*.

Date illustrated: label indicates 1903.

Length of specimen: 6.25 inches [159 mm]; length as illustrated, 8.25 inches [about 210 mm].

Media: inkwash, white gouache, lead pencil.

P13212—Plate 2 E

Hybognathus nuchalis (Agassiz)

Mississippi silvery minnow, Family Cyprinidae

¹⁵⁴Catalogue of Specimens of Hawaiian and Philippine Fishes, with List of Tag Numbers of the Hawaiian and the Philippine Fishes.

Not published previously, although remark concerning reduction for printing is written on illustration. Name on illustration is *Hybognathus nuchale*.

Date illustrated: 1905.

Length of specimen: 3.33 inches [about 84.6 mm]; length as illustrated, 8 inches [about 203 mm].

Media: inkwash, lead pencil, white gouache.

Remarks: Initials E. T. S. [Ernest Thompson Seton] on reverse side of illustration (see discussion of illustrations drawn for Seton).

P13218—Plate 1 E

Macrhybopsis storeriana (Kirtland)

Silver chub, Family Cyprinidae

Not published previously, although remark concerning reduction for printing is written on illustration. Name on illustration *Hybopsis storerianus*.

Date illustrated: 1905.

Length of specimen: 4.6 inches [about 117 mm]; length as illustrated, 8 inches [about 203 mm].

Media: inkwash, lead pencil, white gouache.

Remarks: Initials E. T. S. [Ernest Thompson Seton] on reverse side of illustration (see discussion of illustrations drawn for Seton).

P14692—Plate 10 A

Bodianus perditio (Quoy & Gaimard)

Family Labridae

First published as *Lepidaplois perditio* by Jordan and Snyder (1902a:fig. 2)

Date illustrated: between late 1901 and 18 Jan. 1902 (see P03487, date illustrated).

Length of fish: not directly specified, but Jordan and Snyder (1902a:619) only indicated one specimen, 330 mm, in their description; length as illustrated, 10.5 inches [267 mm].

Media: inked lines and stipples.

Remarks: CBH indicated his charge as “ $3\frac{1}{8} \times 10\frac{1}{4}$ ” [= 32.03 square inches @ \$0.50 =] \$16.” Difference (2.4%) between our measurement and CBH's could be due to mechanical error.

P14859—Plate 18 E

*Coregonus johanna*e (Wagner)

Deepwater cisco, Family Salmonidae

Illustration first published as *Leucichthys johanna*e by Jordan and Evermann (1911:plate 3); identification is uncertain.

Date illustrated: 1906, probably early Oct.; outline based on specimen obtained from fishermen, 30 Sept. 1906; color based on two other specimens, date not indicated, all from Lake Huron, off Cheboygan County, Mich.

Length of specimen used for outline: 14.5 inches [361 mm]; length as illustrated, 8.5 inches [216 mm].

Media: watercolor, gouache, and ink.

P14870—Plate 18 F

Coregonus nigripinnis (Milner)

Blackfin cisco, Family Salmonidae

Illustration first published as *Leucichthys nigripinnis* (Gill)

[sic] by Jordan and Evermann (1911:plate 4).

Date illustrated: 1906, probably late July–early Aug.; outline from specimen collected from Lake Michigan off Berrien Co, Mich., 24 July 1906; color from three other specimens.

Length of specimen used for outline: 15.25 inches [387 mm]; length as illustrated, 9.5 inches [241 mm].

Media: watercolor, gouache, ink, lead pencil.

Remarks: DFSA

P14929—Plate 4 C

Liobagrus reinii Hilgendorf

Family Amblycipitidae

Illustration first published as *Liobagrus reinii* by Jordan and Fowler (1903b:fig. 2).

Date illustrated: between summer 1900 (when obtained from K. Otaki) and 5 Dec. 1902, when Barton A. Bean approved the painting (see date illustrated for P11183).

Length of specimen: 3.5 inches [88.9 mm, SL]; length as illustrated, 10 inches [254 mm].

Media: inkwash, a little white gouache, lead pencil.

Remarks: CBH indicated his charge: “1³/₈” × 10” [= 13.75 × \$0.50] \$6.87.”

P15080—Plate 20 A

Lutjanus analis (Cuvier)

Mutton snapper, Family Lutjanidae

Illustration first published as *Neomaenis analis* by Evermann and Marsh (1900:plate 21).

Date illustrated: spring 1897, Key West, Fla.

Length of specimen: about 11 inches [about 279 mm]; length as illustrated, 9.25 inches [235 mm].

Media: watercolor and gouache.

Remarks: DFSA; previously framed.

P15082—Plate 20 D

Lutjanus apodus (Walbaum)

Schoolmaster, Family Lutjanidae

Illustration first published as *Neomaenis apodus* by Evermann and Marsh (1900:plate 19).

Date illustrated: spring, 1897, Key West, Fla.

Length of specimen: about 23 inches [about 584 mm]; length as illustrated, 9.25 inches [235 mm].

Media: watercolor and gouache.

Remarks: Previously framed. DFSA.

P15116—Plate 10 F

Lutjanus synagris (Linnaeus)

Lane snapper, Family Lutjanidae

Illustration first published as *Neomaenis megalophthalmus* by Evermann and Marsh (1900:fig. 48), based on

the holotype, USNM 49531, from Puerto Real, Puerto Rico.

Date illustrated: between 25 Jan. 1899 (when collected) and 29 Dec. 1900 (when published).

Length of holotype: 11.5 inches [292 mm]; length as illustrated, 9.0625 inches [230 mm].

Media: ink stipples.

Remarks: DFSA.

P15477—Plate 8 A

Repomucenus lunatus (Temminck & Schlegel)

Family Callionymidae

Illustration first published as *Callionymus lunatus* by Jordan and Fowler (1903a:fig. 5).

Date illustrated: probably between early summer and mid Oct. 1902 (see P02328, date illustrated).

Length of specimen: ≤ 5.4375 inches [138 mm]; length as illustrated, 13 inches [330 mm].

Media: inkwash, lead pencil, white gouache highlights.

Remarks: CBH indicated his charge as: “Size—1³/₈” × 13” [= 17.875 square inches] [+ “fin—1³/₈” × 2”” [= 2.75 sq. in] [= total 20.62 sq. in.]. [× \$0.50] = “\$10.30.”

P15479—Plate 8 C

Repomucenus virgis (Jordan & Fowler)

Family Callionymidae

Illustration first published as *Callionymus virgis* by Jordan and Fowler (1903a:fig. 9), based on holotype, CAS-SU 7189.

Date illustrated: probably between early summer and mid Oct. 1902 (see P02328, date illustrated).

Length of holotype: 2.69 inches [42.9 mm]; length as illustrated, 12 inches [305 mm].

Media: inkwash, white gouache, lead pencil on “Winsor & Newton’s water colour sketching boards ‘NOT’ surface, made in all sizes & surfaces . . . London, England.”

Remarks: CBH indicated his charge as: “Size 1³/₈” × 12” [= 16.5 square inches × \$0.50 =] \$8.25.”

P15709—Plate 7 F

Callionymus doryssus (Jordan and Fowler)

Family Callionymidae

Illustration first published as *Calliurichthys doryssus*, by Jordan and Fowler (1903a:fig. 4).

Date illustrated: probably between early summer and mid Oct 1902 (see P02328, date illustrated).

Length of specimen: 7.25 inches [184 mm]; length as illustrated, 12 inches [305 mm].

Media: inkwash and white gouache.

Remarks: CBH indicated his charge: “1” × 12” [= 12 square inches × \$0.50 =] \$6.00.”

P17485—Plate 7 I

Callionymus valenciennesi Temminck and Schlegel

Family Callionymidae

Illustration first published as *Callionymus valenciennesi* by Jordan and Fowler (1903a:fig. 6).

Date illustrated: probably between early summer and mid Oct. 1902 (see P02328, date illustrated).

Length of specimen: unknown, but based on information in publication, ≤ 8.625 inches [219 mm]. If the scale line accompanying the figure represents one inch, the complete fish (male) is about 7.3 inches [about 186 mm] TL; length as illustrated, 16 inches [406 mm].

Media: inkwash, some white gouache.

Remarks: CBH indicated his charge as: "Size- $1\frac{1}{2}$ " \times 16" [= 24 square inches] [+]
Fin. 4 sq. in. Total 28 sq. in. [\times \$0.50 =] \$14.00." DFSA.

P17575–Plate 7 C

Callionymus japonicus Houttuyn

Family Callionymidae

Illustration first published as *Calliurichthys japonicus* by Jordan and Fowler (1903a:fig. 2).

Date illustrated: probably between early summer and mid Oct. 1902 (see P02328, date illustrated).

Length of specimen: based on information in publication, ≤ 11.25 inches [about 286 mm]. If the scale line accompanying the figure represents one inch, the complete fish (male) is about 11.25 inches. TL; length as illustrated, 17 inches [432 mm].

Media: inkwash and white gouache.

Remarks: CBH indicated his charge as: "Size 1" \times 17" [= 17 square inches] [+]
fin $1\frac{1}{2}$ " \times $1\frac{1}{2}$ " [= 2.25" square inches] [= 19.25 square inches \times \$0.50 =] \$9.62."

P17576–Plate 9 D

Chirolophis japonicus (Herzenstein)

Family Stichaeidae

Illustration first published as *Bryostemma otohime* by Jordan and Snyder (1902b:fig. 12).

Date illustrated: between summer of 1900 (when collected) 26 Sept. 1902 (when published).

Length of specimen: about 3.2 inches [about 82 mm], based on scale line with illustration; length as illustrated, 16 inches [406 mm].

Media: inked lines and stipples.

Remarks: CBH indicated his charge as: " $2\frac{9}{16}$ " \times 16" [= 41 square inches \times \$0.50 =] \$20.50."

P17577–Plate 9 E

Opisthocentrus zonope Jordan and Snyder

Family Stichaeidae

Illustration first published as *Opisthocentrus zonope* by Jordan and Snyder (1902b:fig. 21).

Date illustrated: between summer of 1900 (when collected) 26 Sept. 1902 (when published).

Length of specimen: about 4.92 inches [125 mm], based on scale line with illustration; length as illustrated, 16 inches [406 mm].

Media: inked lines and stipples.

Remarks: CBH indicated his charge as: " $2\frac{11}{16}$ " \times 16" [= 41 square inches \times \$0.50 =] \$21.50."

P17578–Plate 9 G

Stichaeopsis nana Kner

Family Stichaeidae

Illustration first published as *Ozortho dictyogrammus* by Jordan and Snyder (1902b:fig. 25).

Date illustrated: between summer of 1900 (when collected) and 26 Sept. 1902 (when published).

Length of specimen: about 6.3 inches (about 160 mm), based on scale line with illustration; length as illustrated, 16 inches (about 406 mm).

Media: inked lines and stipples.

P17579–Plate 9 B

Stichaeus nozawae Jordan and Snyder

Family Stichaeidae

Illustration first published as *Stichaeus nozawae* by Jordan and Snyder (1902b:fig. 26), based on the holotype, in a Japanese collection ("Fisheries Bureau at Sapporo").

Date illustrated: between summer of 1900 (made available to Jordan and Snyder during their expedition to Japan) and 26 Sept. 1902 (when published).

Length of specimen: 10 inches [255 mm]; length as illustrated, 16 inches [406 mm].

Media: inked lines and stipples.

Remarks: CBH indicated his charge as: " 2.25 " \times 16" [= 36 square inches @ \$0.50 =] \$18.00."

P17580–Plate 9 F

Chirolophis saitone (Jordan & Snyder)

Family Stichaeidae

Illustration first published as *Bryostemma saitone* by Jordan and Snyder (1902b:fig. 12), based on the holotype, CAS-SU 7072.

Date illustrated: probably between summer of 1900 (given to Jordan and Snyder during their expedition to Japan) and 26 Sept. 1902 (when published).

Length of holotype: Jordan and Snyder (1902b:468) state that the holotype is 95 mm long. Presumably this is standard length, because beginning on page 467, they wrote, "The only specimen which we have of this species is in such a poor state of preservation that accurate statements concerning the lateral line, the extent of the scaly covering, the tentacles of the head, the shape and character of the fins, and points of less importance can not be made; the caudal fin is entirely gone." Total length as illustrated, 16 inches [406 mm].

Media: inkwash and a little white gouache.

Remarks: Considering the condition of the specimen, one must question its usefulness. CBH must have been challenged to prepare the illustration, of which Jordan and Snyder made no comments. CBH indicated his charge as: " $2\frac{1}{2}$ " \times 16" [= 40 square inches \times \$0.50 =] \$20.00."

P17581–Plate 7 D

Callionymus variegatus Temminck and Schlegel

Family Callionymidae

Illustration first published as *Calliurichthys variegatus* by Jordan and Fowler (1903a:fig. 3)

Date illustrated: probably between early summer and mid Oct. 1902 (see P02328, date illustrated).

Length of specimen: 6.31 inches [160 mm]; length as illustrated, 17 inches [432 mm].

Media: inkwash and white gouache.

Remarks: CBH indicated his charge as: “Size 1 1/4 ” × 17” [= 21.25 square inches] [+] fin 1” × 1 1/2” [= 1.5 square inches] [= 22.75 square inches × \$0.50 =] \$11.37.”

P21866–Plate 7 H

Callionymus valencienni Temminck and Schlegel.

Family Callionymidae

Illustration first published as *Callionymus flagris* by Jordan and Fowler (1903a:fig. 7).

Date illustrated: probably between early summer and mid Oct. 1902 (see P02328, date illustrated).

Length of specimen: about 7.5 inches (190.5 mm) or smaller, based on information in Jordan and Fowler

(1903a:953); length as illustrated, 16.5 inches [429 mm].

Media: inkwash and white gouache.

Remarks: CBH indicated his charge as: “Size 1” × 16.5” [= 16.5 square inches × \$0.50 =] \$8.25.”

P22113–Plate 9 H

Bryozoichthys lysimus (Jordan and Snyder)

Nutcracker prickleback, Family Stichaeidae

Illustration first published as *Bryolophus lysimus* by Jordan and Snyder (1902d:fig. 3), based on the paratype with 62 dorsal-fin spines in CAS SU 3049.

Date illustrated: probably about same time as CBH was illustrating Japanese stichaeids for Jordan and Snyder’s (1902b) study, between summer of 1900 and 4 Nov. 1902, when published. Specimen was collected 21 May 1890.

Length of specimen: about 100 mm TL, based on a scale accompanying the illustration; length as illustrated, 16 inches [406 mm].

Media: ink and inkwash; lead pencil on fin rays; opaque white gouache highlights.

Remarks: CBH indicated his charge as: “2³/16” × 16” [= 35 square inches × \$0.50 =] \$17.50.”

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