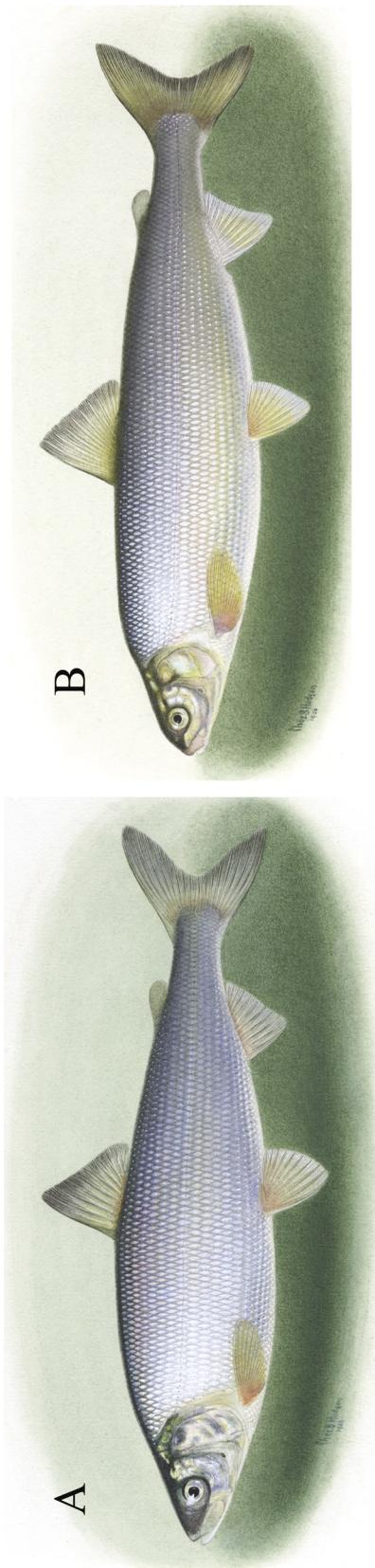


Plate 18.—Salmonid fishes: A, *Salvelinus fontinalis*, P04073; B, *S. namaycush*, P04064; C, *Coregonus clupeaformis*, P03444; D, *C. artedii*, P03445; E, *C. johannae*, P14859; F, *C. nigripinnis*, P14870. For complete information on any individual figure see P number in section "The Illustration Listings."



A

B

C



D

E

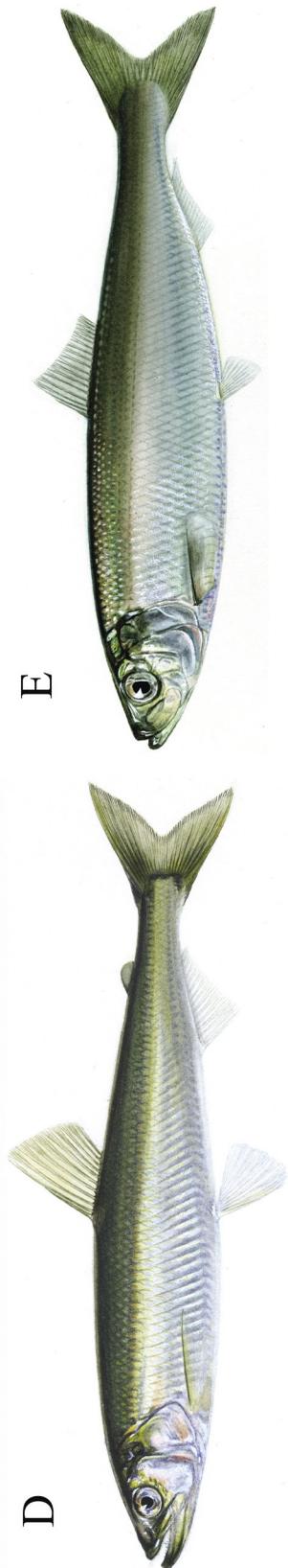
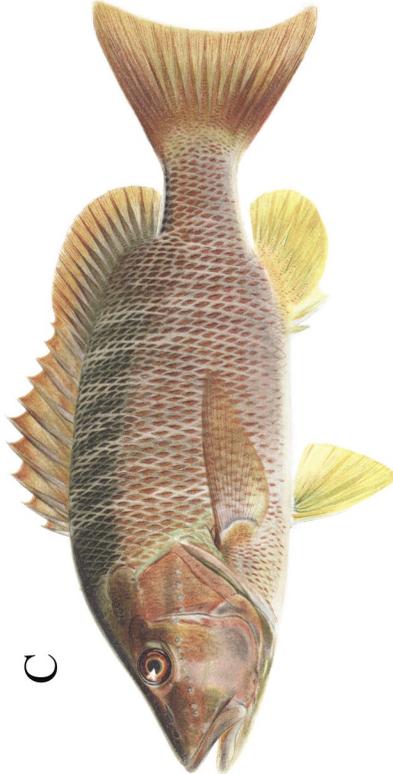


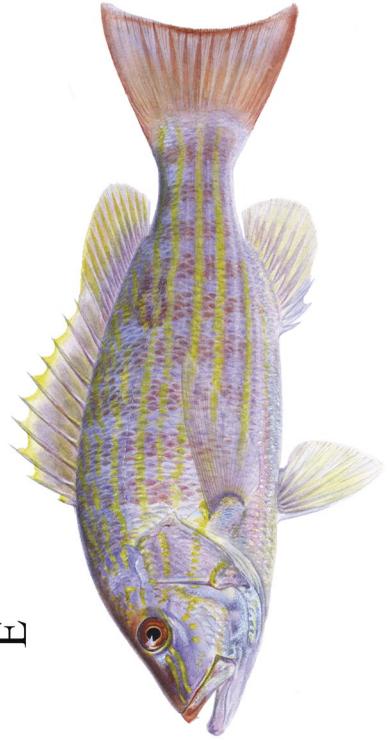
Plate 19.—A, *Coregonus* species? P03462; B, *Prosopium cylindraceum*, P03484; C, *Anguilla rostrata*, P00979; D, *Osmerus mordax*, P08787; E, *Clupea harengus*, P00980; For complete information on any individual figure see P number in section "The Illustration Listings."



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.”

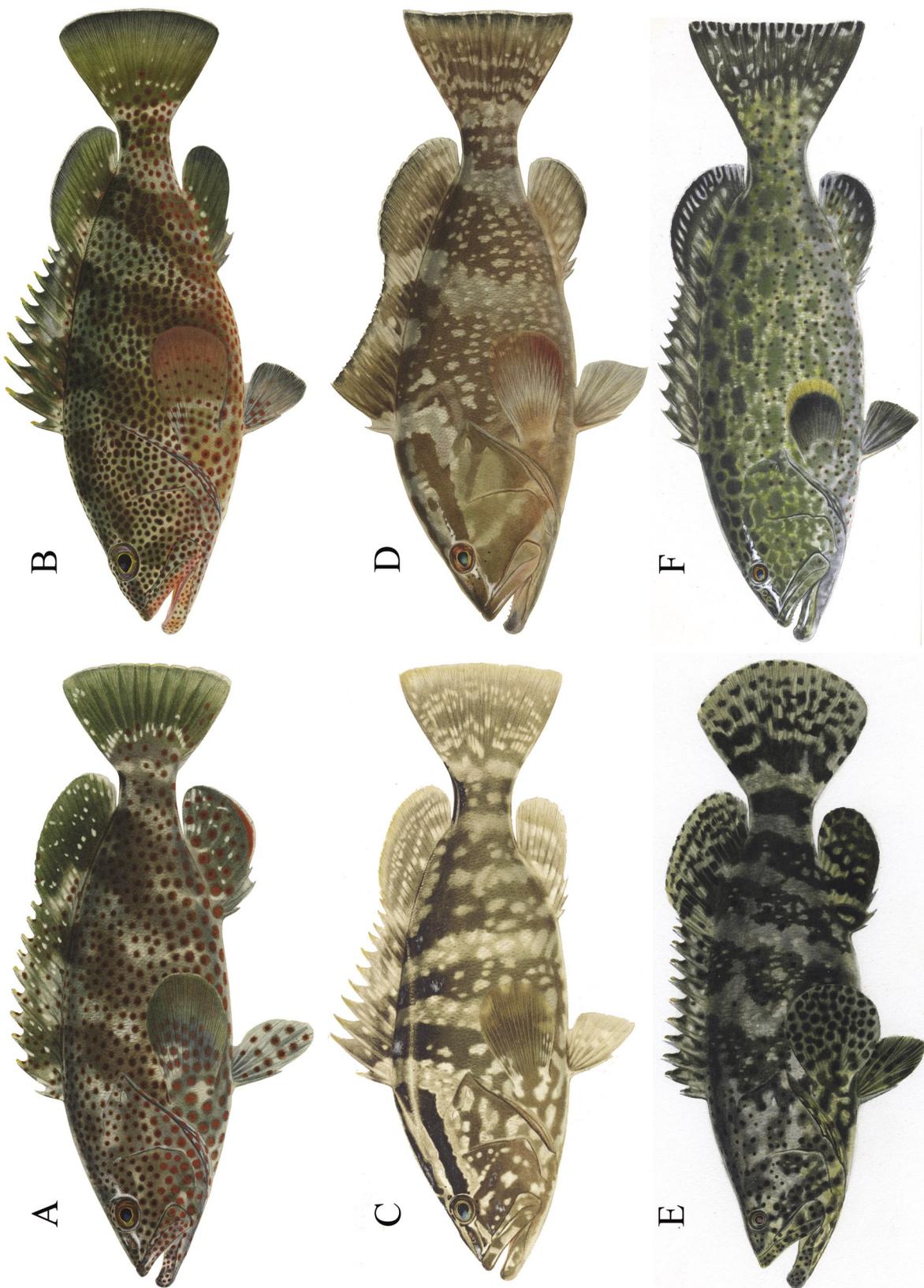


Plate 21.—Serranid fishes (see also Plates 4 A, 22 A, B): A, *Epinephelus adscensionis*, P10448; B, *E. guttatus*, P10475; C, *E. striatus*, XX001; D, *E. morio*, P10482; E, *E. itajara*, P07159; F, *Mycteroperca venenosa*, P09681; For complete information on any individual figure see P or XX number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

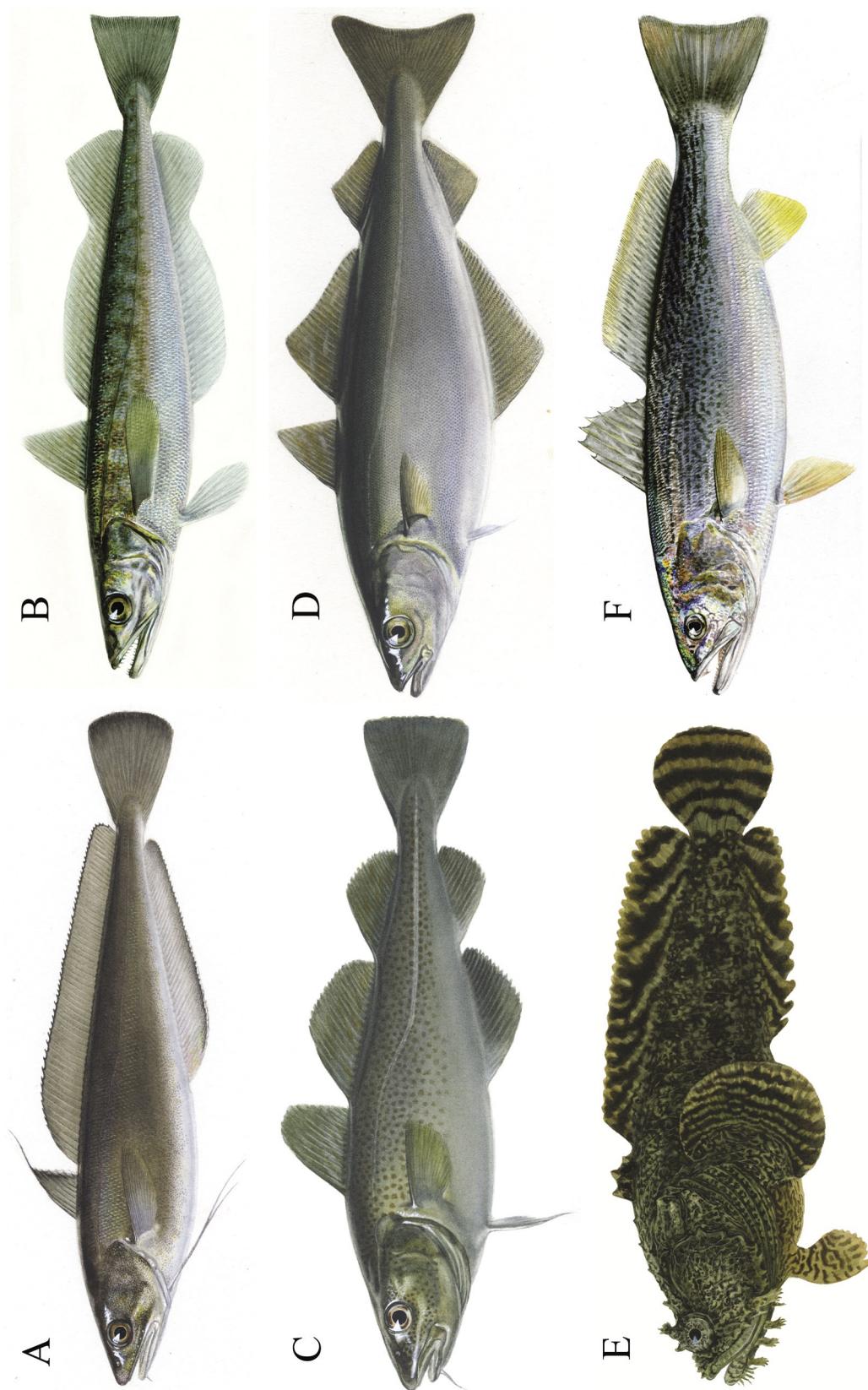


Plate 23.—A, *Urophycis tenuis*, P07976; B, *Merluccius bilinearis*, P00984; C, *Gadus morhua*, P01115; D, *Pollachius virens*, P00982; E, *Opsanus tau*, P00981; F, *Cynoscion regalis*, P00997. For complete information on any individual figure see P number in section "The Illustration Listings."

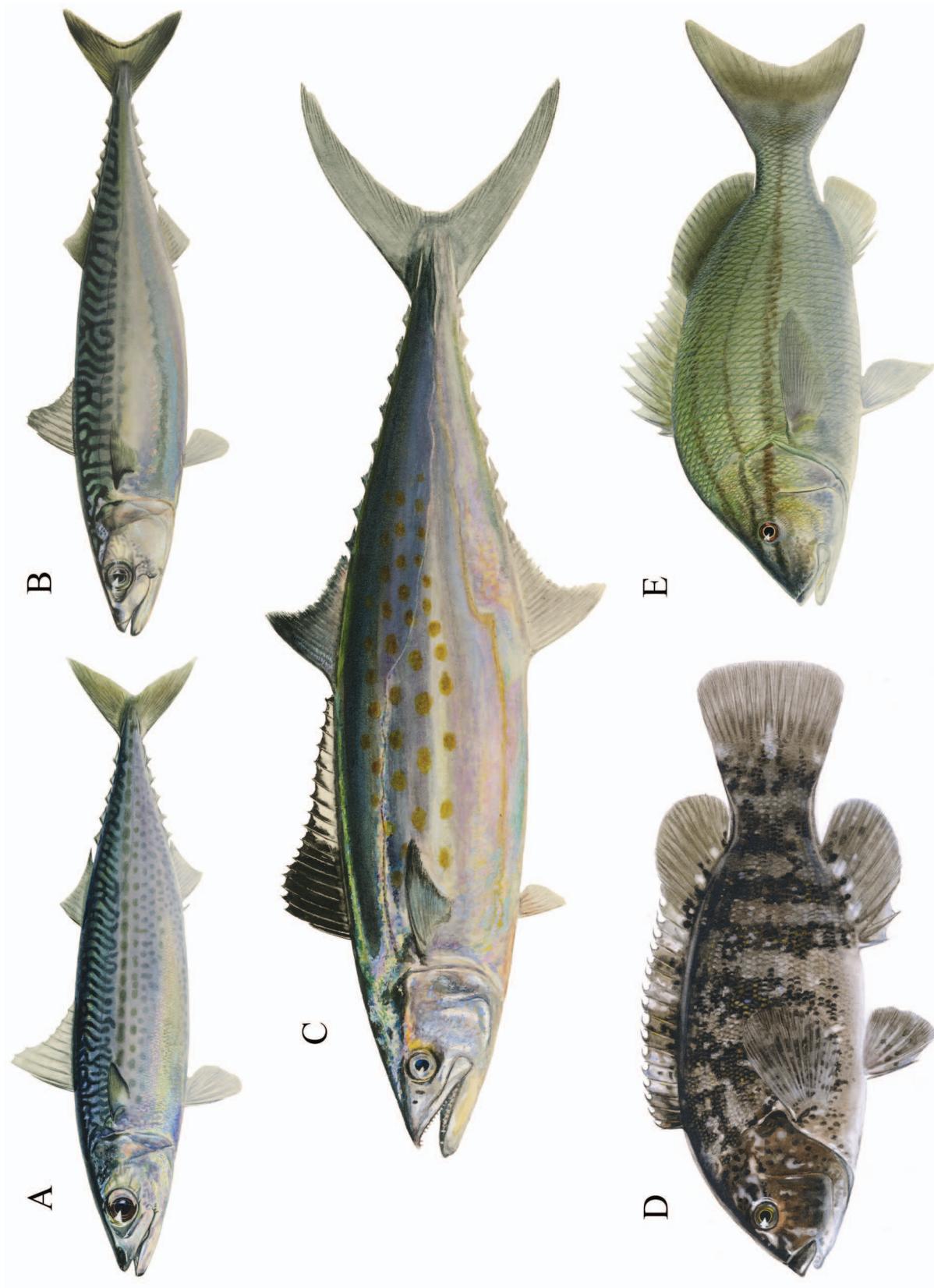


Plate 24.—A, *Scomber colias*, P01001; B, *S. scombrus*, P05890; C, *Scomberomorus maculatus*, P01002; D, *Tautoga onitis*, P00999; E, *Haemulon macrostomum*, P01528. For complete information on any individual figure see P number in section “The Illustration Listings.”

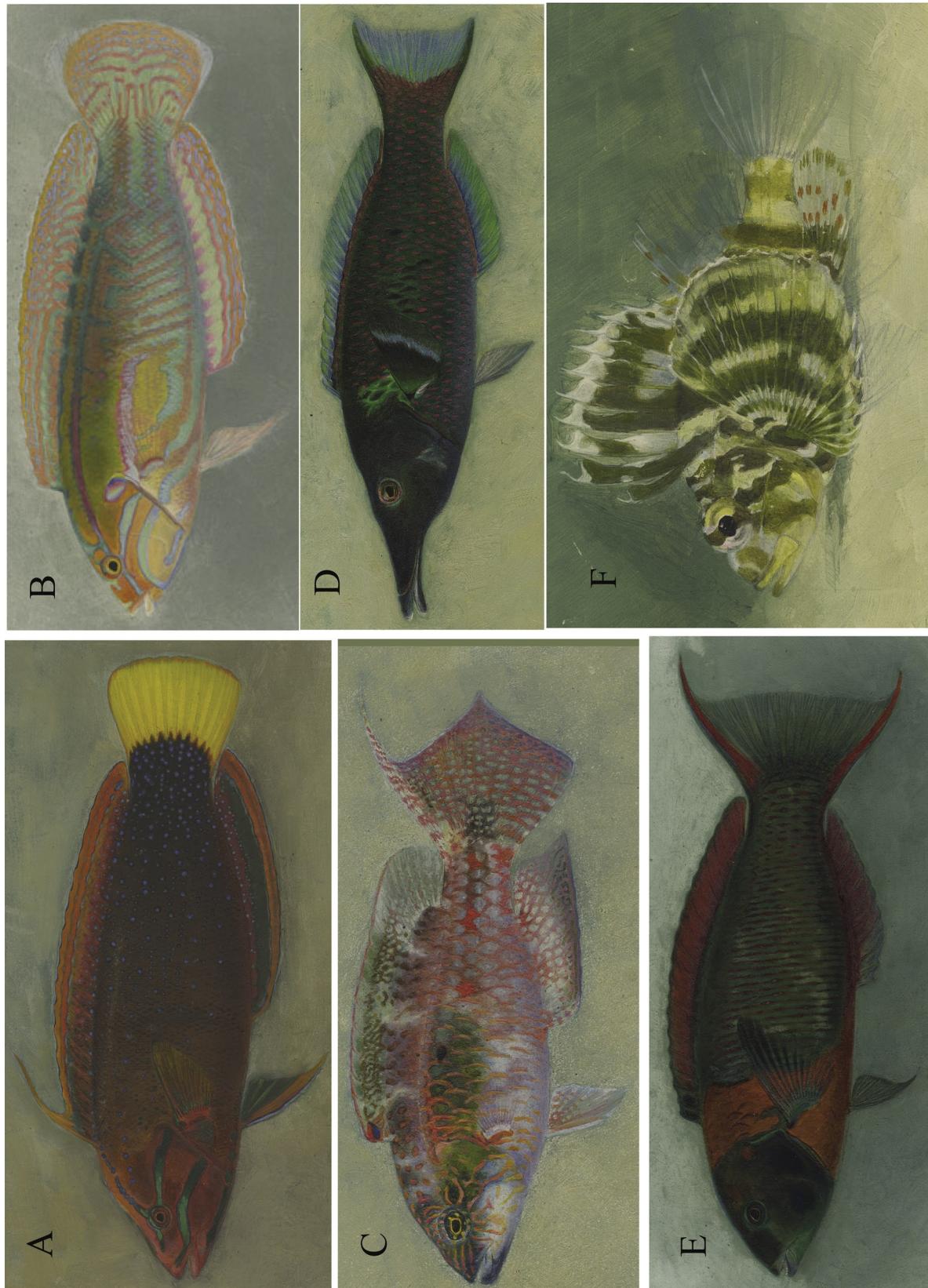


Plate 25.—CBH oil paintings done in Honolulu, Hawaii, 1901 (published images were isolated from backgrounds): A, *Coris gaimard*, P03505; B, *C. venusta*, P03513; C, *Oxycheilinus bimaculatus*, P02933; D, *Gomphosus varius*, P11628; E, *Thalassoma diprery*, P04925; F, *Dentrochirus barberi*, P04008. 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 illus-
trated, 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 illus-
trated, 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 Ever-
mann 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 *Auchenistiustus stahli* by Ever-
mann and Marsh (1900:fig. 102), based on the holotype,
USNM 49372 (indicated on illustration), from Ponce,
Puerto Rico.

Date illustrated: probably from preserved specimen, be-
tween 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. Ich-
thyologists 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 $16\frac{3}{4}$ " [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, $23\frac{1}{2}$ [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 $\frac{7}{8}$ 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, "16 $\frac{6}{8}$ " 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