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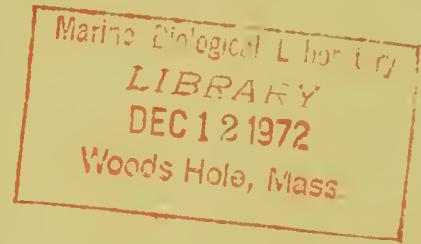


NOAA Technical Report NMFS SSRF-658

U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
National Marine Fisheries Service

List of Fishes of Alaska and Adjacent Waters with a Guide to Some of Their Literature

JAY C. QUAST and ELIZABETH L. HALL



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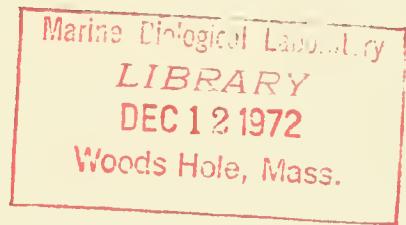
NATIONAL MARINE FISHERIES SERVICE

Philip M. Roedel, Director

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List of Fishes of Alaska and Adjacent Waters with a Guide to Some of Their Literature

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ABSTRACT

The authors list 432 species known to occur in Alaska waters, supplemented by 137 species that have been recorded from neighboring waters and, in the authors' opinion, should be considered when new collections are identified. Species entries are annotated to include common names, recorded range, useful references, localities represented by specimens in the collection of the Auke Bay Fisheries Laboratory, and comments on taxonomy. Recorded geographic ranges are extended for 26 species: Ophidiidae — *Spectrunculus radcliffei*; Scorpaenidae — *Sebastes emphaeus*, *S. nigrocinetus*, *S. wilsoni*; Cottidae — *Eurymenes gyrinus*, *Gymnocanthus detrisus*, *G. pistilliger*, *Hemilepidotus zapus*, *Icelus spatula*, *I. uncinalis*, *Myoxocephalus jaok*, *Nautichthys pribilorius*, *Triglops scepticus*; Agonidae — *Agonopsis emmelane*, *Aspidophoroides bartoni*, *Ocella verrucosa*; Cyclopteridae — *Careproctus melanurus*, *C. rastinus*, *Cyclopterus phrynoides*, *Liparis bristolense*, *L. ochotensis*, *Paraliparis caudatus*, *P. deani*, *Temnocora candida*; Scombridae — *Thunnus thynnus*; Pleuronectidae — *Limanda proboscidea*.

INTRODUCTION

This list is an outgrowth of systematic and taxonomic work on the Alaska fish fauna at the National Marine Fisheries Service Auke Bay Fisheries Laboratory. It is an interim document designed to fill the gap between the earlier lists of Wilimovsky (1954, 1964), now partially out of date, and more comprehensive works that are expected in the future. This document should not be regarded as fully authoritative because of the limited time the authors had to devote to the task and the complexities of the literature. Rather, it is intended as a preliminary guide to the species and their literature — a first entry for those not fully acquainted with the Alaska fish fauna.

The list departs from its predecessors in several ways. Numerous additional species since recorded for Alaska are included, as well as some species recorded for neighboring waters but not for Alaska. The latter are included on the theory that numerous range extensions into Alaska will be recorded in the future and that the student of the fauna must be aware of possible species that may contribute to the fauna. Some inconsistency in the geographic citations, particularly in regard to what constitutes "adjacent waters," was unavoidable. Most of the geographic data are from the literature, including published translations, and the ranges cited often were not comparable between

works. We judged the species separately in regard to what constitutes "adjacent waters" on the basis of what is known about their ecology and the status of other general information on the species or their higher taxons. For example, "adjacent waters" should be much more immediate to a recorded distribution in the instance of tidepool cottid species than in the apparently wide-ranging and poorly known deepwater species of Cyclopteridae. Species not recorded for Alaska waters (in the literature or the Auke Bay fish collection) are preceded by an asterisk. Geographic names were chosen in regard to their general occurrence in atlases published in the United States and on regional maps such as those published by the National Geographic Society. For the most part, the names indicate regions rather than precise localities.

Arrangement of teleostean families and spelling of their names follow Greenwood et al. (1966). Literature citations are restricted principally to those of value for understanding the systematics, taxonomy, or distribution of the species. Citations often apply to synonyms of species in the list.

General faunal works have not always been cited in the species entries, yet are important sources of data on many of the species. These general works include Bean's catalog (1881); the four volumes of Jordan and Evermann (1896-1900); Evermann and Goldsborough (1907); Gilbert and Burke (1912); Jordan, Evermann, and Clark (1930); Andriyashev (1954); and Clemens and Wilby (1961). More specialized but important also are Norman (1934); Burke (1930); Wilimovsky (1954, 1964); Phillips (1957); and McPhail and Lindsey (1970). Unfortunately, a provisional key to the fishes of Alaska by Wilimovsky (1958) is no longer available from any source.

A further purpose of the list is to inform scientists of collections of Alaska species that are available for study at the Auke Bay Laboratory. General regions for which the Auke Bay Laboratory has obtained collections are indicated at the end of species entries after "ABBL:."¹ Localities are underlined when they represent a range extension. Common names include those recommended by the American Fisheries Society (Bailey et al., 1970).

LIST OF FISHES

MYXINIDAE — hagfishes

Eptatretus deani (Evermann and Goldsborough).
Black hagfish.

Southeastern Alaska-California (Grinols, 1965; Jordan, Evermann, and Clark, 1930; Wilimovsky, 1954).

ABBL: southeastern Alaska.

Eptatretus stouti (Lockington). Pacific hagfish, California hagfish, lamperina.

Southeastern Alaska-California (Clemens and Wilby, 1961; Wilimovsky, 1954).

PETROMYZONTIDAE — lampreys

Eutiosphenus tridentatus (Gairdner). Pacific lamprey.

Japan; Bering Sea to California (Berg, 1931; Carl, Clemens, and Lindsey, 1959; Gilbert, 1895; Gilbert and Thompson, 1905; Hubbs,

1967; Jordan et al., 1930; Jordan and Gilbert, 1899; McPhail and Lindsey, 1970; Taylor, 1967a; Wilimovsky, 1954, 1964).

ABBL: southeastern Alaska.

Lampetra ayresi (Günther). River lamprey. British Columbia-California (Carl et al., 1959; Clemens and Wilby, 1961; Jordan et al., 1930; McPhail and Lindsey, 1970; Vladkyov and Follett, 1958).

ABBL: Stephens Passage, southeastern Alaska.

Lampetra japonica (Martens). Arctic lamprey. Sea of Japan; eastern and western Bering Sea; Arctic Alaska; Alaska Peninsula; Canada (Andriyashev, 1954; Berg, 1931;

¹ Because the Auke Bay Fisheries Laboratory was called the Auke Bay Biological Laboratory at the time most of the collections were made, ABBL is used in the list.

Heard, 1966; McPhail and Lindsey, 1970; Okada, 1955; Shmidt, 1950; Walters, 1953, 1955; Wilimovsky, 1954).

ABBL: Alaska Peninsula and south-central Alaska.

Lampetra lamottenii (LeSueur). American brook lamprey.

Eastern and northern Asia; Gulf of Alaska; central Alaska; eastern North America (Heard, 1966; Wilimovsky, 1954).

ABBL: Yukon River; Kenai Peninsula.

HEXANCHIDAE — cow sharks

Hexanchus griseus (Bonnaterre). Sixgill shark. Gulf of Alaska-California (Briggs, 1960; Clemens and Wilby, 1961).

**Notorynchus maculatus* Ayres. Sevengill shark. British Columbia-California (Clemens and Wilby, 1961).

ALOPIIIDAE — thresher sharks

**Alopias vulpinus* (Bonnaterre). Thresher shark.

British Columbia-California; western and eastern North Atlantic (Clemens and Wilby, 1961; Leim and Scott, 1966; Ueno, 1970).

LAMNIDAE — mackerel sharks

Carcharodon carcharias (Linnaeus). White shark.

Temperate parts of all oceans; southeastern Alaska-California; North Atlantic (Briggs, 1960; Leim and Scott, 1966; Royce, 1963).

Cetorhinus maximus (Gunnerus). Basking shark.

Sea of Japan; Gulf of Alaska-Baja California (Briggs, 1960; Clemens and Wilby, 1961; Honma and Mizusawa, 1966; Leim and Scott, 1966; Ueno, 1970).

Lamna ditropis Hubbs and Follett. Salmon shark.

Japan; Alaska-California (Bright, 1960; Isackson, Simenstad, and Burgner, 1971; Leim and Scott, 1966; Neave and Hanavan, 1960; Okada, 1955; Ueno, 1970; Wilimovsky, 1954).

SCYLIORHINIDAE — cat sharks

**Apristurus brunneus* (Gilbert). Brown cat shark.

British Columbia-California (Clemens and Wilby, 1961; Fitch, 1966a; Gilbert and Thompson, 1905; Grinols, 1965).

CARCHARHINIDAE — requiem sharks

**Galeorhinus zyopterus* Jordan and Gilbert. Soupfin shark.

British Columbia-California (Clemens and Wilby, 1961).

Prionace glauca (Linnaeus). Blue shark.

Japan; Gulf of Alaska-Baja California; North Atlantic (Clemens and Wilby, 1961; Leim and Scott, 1966; Neave and Hanavan, 1960; Okada, 1955; Ueno, 1970).

SQUALIDAE — dogfish sharks

Somniosus pacificus Bigelow and Schroeder. Pacific sleeper shark.

Japan; Bering Sea-California (Jordan and Gilbert, 1899; Vladkyov, 1933; Wilimovsky, 1954).

Squalus acanthias Linnaeus. Spiny dogfish.

South Korea; Japan; Sakhalin; Bering Sea-California; North Atlantic (Grinols, 1965; Jordan and Gilbert, 1899; Leim and Scott, 1966; Okada, 1955; Shmidt, 1950; Taylor, 1967a; Wilimovsky, 1954, 1964).

SQUATINIDAE — angel sharks

Squatina californica Ayres. Pacific angel shark. Southeastern Alaska-Baja California (Roedel, 1953; Wilimovsky, 1954).

TORPEDINIDAE — electric rays

**Torpedo californica* Ayres. Pacific electric ray. British Columbia-California (Clemens and Wilby, 1961).

RAJIDAE — skates

- **Raja abyssicola* Gilbert. Deepsea skate. British Columbia-Oregon (Clemens and Wilby, 1961; Gilbert, 1895; Grey, 1956; Grinols, 1965).
- Raja aleutica* Gilbert. Aleutian skate. Hokkaido-southeastern Alaska (Gilbert, 1895; Ishiyama, 1967; Jordan and Gilbert, 1899; Ueno, 1970; Wilimovsky, 1954).
- Raja binoculata* Girard. Big skate. Bering Sea; southeastern Alaska-California (Roedel, 1953; Shmidt, 1950; Wilimovsky, 1954).
- **Raja inornata* Jordan and Gilbert. California skate. Strait of Juan de Fuca-Baja California (Roedel, 1953).
- Raja interrupta* Gill and Townsend. Bering skate, interrupted skate (Russ.). Bering Sea (Andriyashev, 1937; Jordan and Gilbert, 1899; Ueno, 1970; Wilimovsky, 1954).
- Raja kincaidi* Garman. Black skate. Bering Sea-California (Alverson, 1951; Wilimovsky, 1954, 1964). ABBL: Shelikof Strait.
- Raja parmifera* Bean. Alaska skate, armored skate (Russ.). Bering Sea-southeastern Alaska (Gilbert, 1895; Isakson et al., 1971; Jordan and Gilbert, 1899; Ueno, 1970; Wilimovsky, 1954, 1964).
- Raja rhina* Jordan and Gilbert. Longnose skate. Southeastern Alaska-California (Fitch, 1966a; Grinols, 1965; Wilimovsky, 1954).
- Raja rosispinis* Gill and Townsend. Flathead skate. Bering Sea-Oregon (Grinols, 1965; Jordan and Gilbert, 1899; Wilimovsky, 1954).
- **Raja smirnovi* Soldatov and Povlenko. Yellow Sea; Hokkaido, Sea of Japan; Sea of Okhotsk (Ishiyama, 1967; Shmidt, 1950; Ueno, 1970).
- Raja stellulata* Jordan and Gilbert. Starry skate, prickly skate. Bering Sea-California (Gilbert, 1895; Grinols, 1965; Jordan and Gilbert, 1899; Wilimovsky, 1954).

sky, 1964).

ABBL: southeastern Alaska.

- Raja trachura* Gilbert. Roughtail skate. Gulf of Alaska-California (Gilbert, 1895; Grinols, 1965; Isakson et al., 1971; Wilimovsky, 1954).

DASYATIDAE — stingrays

- **Dasyatis dipterura* (Jordan and Gilbert). Diamond stingray. British Columbia-Baja California (Clemens and Wilby, 1961).

CHIMAERIDAE — chimaeras

- Hydrolagus colliei* (Lay and Bennett). Ratfish. Southeastern Alaska-Gulf of California (Grinols, 1965; Lavenberg and Fitch, 1966; Taylor, 1967a; Wilimovsky, 1954).

ACIPENSERIDAE — sturgeons

- **Acipenser baeri* Brandt. Siberian osetr. Kolyma Basin of Siberia westward; possibly in Arctic Alaska (Walters, 1955).
- Acipenser medirostris* Ayres. Green sturgeon. Sea of Japan; Sea of Okhotsk; Aleutian Islands; Gulf of Alaska-California (Carl et al., 1959; Okada, 1955; Shmidt, 1950; Ueno, 1970; Wilimovsky, 1954, 1964). ABBL: southeastern Alaska.
- Acipenser transmontanus* Richardson. White sturgeon. Gulf of Alaska-California (Carl et al., 1959; Wilimovsky, 1954).

SYNAPHOBANCHIDAE

- Synaphobranchus bathybius* Günther. Japan; Kurilo-Kamchatkan Trench; Bering Sea; Hawaiian Islands; Indian Ocean (Gilbert, 1895; Grey, 1956; Grinols, 1965; Jordan and Gilbert, 1899; Rass, 1954; Wilimovsky, 1954).

SERRIVOMERIDAE

**Serrivomer jesperseni* Bauchot-Boutin.
Pacific and Indian Oceans; British Columbia;
Gulf of Panama (Taylor, 1967a, 1967b).

NEMICHTHYIDAE — snipe eels

Avocettina gilli (Bean). Snipe eel.
Southeastern Alaska-Washington (Grinols,
1965; Wilimovsky, 1954).

**Avocettina infans* (Günther).
Pacific and Indian Oceans; British Columbia-
Gulf of Panama (Taylor, 1967a, 1967b).

**Nemichthys avocetta* Jordan and Gilbert.
Threadfish.
British Columbia-Oregon (Clemens and Wilby,
1961; Grinols, 1965; Taylor, 1967a; Ueno,
1970).

**Nemichthys scolopaceus* Richardson. Slender
snipe eel.
British Columbia; California; Gulf of Calif-
ornia; south Atlantic; cosmopolitan
(Grinols, 1965; Lavenberg and Fitch, 1966;
Leim and Scott, 1966; Ueno, 1970).

CYEMIDAE

**Cyema atrum* Günther.
Widespread in tropical to temperate latitudes
(Briggs, 1960; Grey, 1956; Grinols, 1966a).

NOTACANTHIDAE — spiny eels

Macdonaldia challengerii (Vaillant).
Japan; Bering Sea; Vancouver Island (Grey,
1956; Peden, 1968; Vaillant, 1888).

Polyacanthonotus altus (Gill and Townsend).
Bering Sea (Rass, 1954).

Polyacanthonotus challengerii (Vaillant).
Kurilo-Kamchatkan Trench; Bering Sea (Gil-
bert, 1895; Jordan and Gilbert, 1899; Rass,
1954; Wilimovsky, 1954).

Polyacanthonotus longus (Gill and Townsend).
Bering Sea (Rass, 1954).

CLUPEIDAE — herrings

Alosa sapidissima (Wilson). American shad.

Introduced into California waters in 1871;
now Gulf of Alaska-California; western
North Atlantic (Carl et al., 1959; Leim and
Scott, 1966; Wilimovsky, 1954).

ABBL: southeastern Alaska.

Clupea harengus pallasi Valenciennes. Pacific
herring, sold (Russ.).

Sea of Japan-Bering Strait; Chukchi Sea-
Laptev Sea-Coronation Gulf; Aleutian
Islands; Bering Sea-California (Andriy-
yashev, 1937, 1954; Jordan and Gilbert,
1899; Leim and Scott, 1966; Okada, 1955;
Popov, 1933; Roedel, 1953; Scofield, 1899;
Shmidt, 1950; Ueno, 1970; Walters, 1953,
1955; Wilimovsky, 1954, 1964).

ABBL: Chukchi Sea; Bristol Bay; south-
eastern Alaska.

Sardinops sagax (Jenyns). Pacific sardine.
Kamchatka; southeastern Alaska-Gulf of Calif-
ornia (Andriyash, 1937; Wilimovsky,
1954).

ENGRAULIDAE — anchovies

**Engraulis mordax* Girard. Northern anchovy.
British Columbia-Baja California (Clemens
and Wilby, 1961).

SALMONIDAE — trouts

Coregonus autumnalis (Pallas). Arctic cisco.²
Sea of Okhotsk; coast of Arctic Asia and
America; Yukon River (Andriyash, 1954;
McPhail and Lindsey, 1970; Walters, 1955;
Wilimovsky, 1954).

ABBL: Yukon River.

Coregonus clupeaformis (Mitchill). Lake white-
fish, common whitefish.³
Yukon River; Beaufort Sea; British Columbia;
Hudson Bay; southeastern Alaska-Great

² We have not examined our material to separate it
into *Coregonus autumnalis* and *C. laurettae* according
to the redefinition of *C. laurettae* by McPhail (1965).
Our records for *C. autumnalis*, therefore, possibly rep-
resent both species.

³ McPhail and Lindsey (1970) refer to the "*Coregonus*
clupeaformis" complex, including *C. clupeaformis* (Mitchill),
C. pidschian (Gmelin), and *C. nelsoni* (Bean). The
authors discuss recent taxonomy of these nominal
species.

Lakes (Carl et al., 1959; Jordan and Gilbert, 1899; Leim and Scott, 1966; McPhail and Lindsey, 1970; Walters, 1955; Wilimovsky, 1954).

ABBL: Yukon River; south-central Alaska; Beaufort Sea.

Coregonus laurettae Bean (see footnote 2).

Kamchatka; Cook Inlet; Gulf of Alaska; north and east to Colville River (McPhail and Lindsey, 1970).

Coregonus nasus (Pallas). Broad whitefish, round-nosed whitefish.

Rivers and lakes of Arctic Basin; Kuskokwim River; Yukon River; USSR-MacKenzie River, Canada (Andriyashev, 1954; Carl et al., 1959; Jordan and Gilbert, 1899; McPhail and Lindsey, 1970; Scofield, 1899; Walters, 1955; Wilimovsky, 1954).

ABBL: Yukon River; Colville River on Beaufort Sea.

Coregonus pidschian (Gmelin). Humpback whitefish.

Arctic Basin; Murmansk-Beaufort Sea; Yukon River (Andriyashev, 1954; McPhail and Lindsey, 1970; Walters, 1955; Wilimovsky, 1954).

ABBL: Central and Arctic Alaska.

Coregonus sardinella Valenciennes. Least cisco, lake herring.

Arctic Basin; Kara River-Mackenzie River (Andriyashev, 1954; McPhail and Lindsey, 1970; Walters, 1955; Wilimovsky, 1954).

ABBL: Colville River on Beaufort Sea; Yukon River; Alaska Peninsula.

Oncorhynehus gorbuseha (Walbaum). Pink salmon, gorbuscha (Russ.), humpback.

Japan; Peter the Great Bay; Amur River; Sea of Okhotsk; Petropavlovsk; Point Barrow; Mackenzie River, Canada; Bering Sea; Aleutian Islands; southeastern Alaska-California (Andriyashev, 1937; Carl et al., 1959; Isakson et al., 1971; Jordan and Gilbert, 1899; Leim and Scott, 1966; McPhail and Lindsey, 1970; Popov, 1933; Scofield, 1899; Shmidt, 1950; Taylor, 1967a; Ueno, 1970; Walters, 1955; Wilimovsky, 1954, 1964).

ABBL: Alaska Peninsula; Prince William Sound-southeastern Alaska.

Oncorhynchus keta (Walbaum). Chum salmon, dog salmon.

Korea; Peter the Great Bay; Sea of Japan; Hokkaido; Sea of Okhotsk; Petropavlovsk; Anadyr Gulf; Lena River; Point Barrow; Mackenzie River, Canada; Bering Strait east to Mackenzie River; Aleutian Islands; Yukon River; southeastern Alaska-California (Andriyashev, 1937, 1954; Isakson et al., 1971; Jordan and Gilbert, 1899; McPhail and Lindsey, 1970; Okada, 1955; Popov, 1933; Shmidt, 1950; Taylor, 1967a; Ueno, 1970; Walters, 1955; Wilimovsky, 1954, 1964).

ABBL: Yukon River; Prince William Sound; southeastern Alaska-California.

Oncorhynchus kisutch (Walbaum). Coho salmon, silver salmon.

Japan; Kurile Islands; Sakhalin; Sea of Okhotsk; Kamchatka north to Anadyr Gulf; Aleutian Islands; Point Hope; Yukon River; Kotzebue Sound-southeastern Alaska-California (Andriyashev, 1937, 1954; Isakson et al., 1971; Jordan and Gilbert, 1899; McPhail and Lindsey, 1970; Popov, 1933; Shmidt, 1950; Taylor, 1967a; Ueno, 1970; Wilimovsky, 1954, 1964).

ABBL: Alaska Peninsula; south-central Alaska; Prince William Sound; southeastern Alaska.

**Oncorhynchus masu* Brevoort.

Sea of Japan; Sea of Okhotsk; Sakhalin; possibly west coast of Kamchatka (Shmidt, 1950; Ueno, 1970).

Oncorhynchus nerka (Walbaum). Sockeye salmon, red salmon. Kokanee salmon (lacustrine).

Hokkaido; Kurile Islands; Sea of Okhotsk; Kamchatka north to Anadyr Gulf; Bering Sea; Kotzebue Sound; Aleutian Islands-California (Andriyashev, 1954; Isakson et al., 1971; Jordan and Gilbert, 1899; McPhail and Lindsey, 1970; Okada, 1955; Popov, 1933; Scofield, 1899; Shmidt, 1950; Taylor, 1967a; Ueno, 1970; Wilimovsky, 1954, 1964).

ABBL: Yukon River; Kenai Peninsula; southeastern Alaska.

Oncorhynchus tshawytscha (Walbaum). Chinook salmon, king salmon.

Japan; Kamchatka; Petropavlovsk; Anadyr Gulf; Aleutian Islands; Yukon River; Kotzebue Sound; Bering Sea-California (Andriyashov, 1954; Honma and Mizusawa, 1966; Isakson et al., 1971; Jordan and Gilbert, 1899; McPhail and Lindsey, 1970; Popov, 1933; Shmidt, 1950; Taylor, 1967a; Ueno, 1970; Wilimovsky, 1954, 1964);.

ABBL: Alaska Peninsula; Yukon River; Kenai Peninsula; southeastern Alaska.

Prosopium coulteri (Eigenmann and Eigenmann). Pygmy whitefish.

South-central Alaska-Pacific northwest (Carl et al., 1959; McPhail and Lindsey, 1970; Wilimovsky, 1954).

ABBL: Alaska Peninsula.

Prosopium cylindraceum (Pallas). Round whitefish.

Siberia-Canada; Yukon River-Great Lakes; Alaska Peninsula-southeast Alaska (Carl et al., 1959; McPhail and Lindsey, 1970; Walters, 1955; Wilimovsky, 1954).

ABBL: Alaska Peninsula; Yukon River; Susitna River; Copper River.

Salmo clarki Richardson. Cutthroat trout.

Southeastern Alaska-California (Carl et al., 1959; Wilimovsky, 1954).

ABBL: southeastern Alaska.

Salmo gairdneri Richardson. Rainbow trout.

Japan; Sea of Okhotsk; Bering Sea-Baja California. Introduced worldwide (Carl et al., 1959; Honma and Mizusawa, 1966; Leim and Scott, 1966; McPhail and Lindsey, 1970; Okada, 1955; Wilimovsky, 1954, 1964).

ABBL: Alaska Peninsula; Kodiak Island; Kenai Peninsula; southeastern Alaska.

**Salmo mykiss* (Walbaum).

Petropavlovsk (Jordan and Gilbert, 1899; Popov, 1933).

**Salmo penshiniensis* Pallas.

Petropavlovsk (Popov, 1933; Shmidt, 1950).

Salvelinus alpinus (Linnaeus). Arctic char. Arctic coasts of Asia and North America; Greenland; Scandinavia; widespread in Alaska north of the Alaska Peninsula (Andriyashov, 1954; Leim and Scott, 1966; McPhail and Lindsey, 1970; Popov, 1933;

Walters, 1955; Wilimovsky, 1954).

ABBL: Alaska Peninsula.

Salvelinus fontinalis (Mitchill). Brook trout. Introduced into Japan and southeastern Alaska; native to eastern North America (Leim and Scott, 1966; McPhail and Lindsey, 1970; Okada, 1955; Wilimovsky, 1954).

ABBL: southeastern Alaska.

**Salvelinus leucomaenis* (Pallas).

Sea of Japan; Okhotsk Sea; Kamchatka; Petropavlovsk; western Bering Sea (Jordan and Gilbert, 1899; Popov, 1933; Shmidt, 1950; Ueno, 1970).

Salvelinus malma (Walbaum). Dolly Varden.

Yellow Sea; Sea of Japan; Sea of Okhotsk; Petropavlovsk; Bering Sea; interior Alaska; Aleutian Islands-California (Andriyashov, 1954; Carl et al., 1959; Isakson et al., 1971; Jordan and Gilbert, 1899; McPhail and Lindsey, 1970; Popov, 1933; Scofield, 1899; Shmidt, 1950; Ueno, 1970; Wilimovsky, 1954, 1964).

ABBL: Alaska Peninsula; Bristol Bay; Kodiak Island; Kenai Peninsula; Yukon River; southeastern Alaska.

Salvelinus namaycush (Walbaum). Lake trout.

Drainages into Bering and Chukchi Seas; Arctic Alaska to Labrador; Alaska Peninsula-British Columbia; northeastern United States (Carl et al., 1959; Jordan and Gilbert, 1899; McPhail and Lindsey, 1970; Walters, 1955; Wilimovsky, 1954).

ABBL: Alaska Peninsula.

Stenodus leucichthys (Güldenstadt). Inconnu, sheefish.

White Sea-Bering Strait; Kamchatka; Yukon River east to Mackenzie and Anderson Rivers (Andriyashov, 1954; Carl et al., 1959; McPhail and Lindsey, 1970; Walters, 1955; Wilimovsky, 1954).

ABBL: Yukon River.

Thymallus arcticus (Pallas). Arctic grayling.

Siberia and Arctic North America (Andriyashov, 1954; Carl et al., 1959; McPhail and Lindsey, 1970; Walters, 1955; Wilimovsky, 1954).

ABBL: Yukon River; Copper River; Alaska Peninsula; Kenai Peninsula.

OSMERIDAE — smelts

**Allosmerus elongatus* (Ayres). Whitebait smelt.

British Columbia-southern California (Barraclough and Wilson, 1971; McAllister, 1963).

Hypomesus olidus (Pallas). Pond smelt.

Korea-Sea of Okhotsk; Kamchatka-Chukchi Sea; Arctic Alaska-California (Andriyashev, 1954; Jordan and Gilbert, 1899; McAllister, 1963; McPhail and Lindsey, 1970; Okada, 1955; Popov, 1933; Scofield, 1899; Shmidt, 1950; Ueno, 1970; Wilimovsky, 1954).

ABBL: Alaska Peninsula; Bristol Bay.

Hypomesus pretiosus (Girard). Surf smelt.

Northern Sea of Japan; Sea of Okhotsk; south side of Alaska Peninsula; Prince William Sound; Gulf of Alaska-California (McAllister, 1963; Phinney and Dahlberg, 1968; Shmidt, 1950; Wilimovsky, 1954).

ABBL: southeastern Alaska.

Mallotus villosus (Müller). Capelin, moiva (Russ.).

Sea of Japan; Sea of Okhotsk; Chukchi Sea; Arctic Alaska-Washington; North Atlantic Ocean (Andriyashev, 1937, 1954; Gilbert, 1895; Jordan and Gilbert, 1899; Leim and Scott, 1966; McAllister, 1963; Scofield, 1899; Shmidt, 1950; Ueno, 1970; Vladivostok, 1933; Wilimovsky, 1954, 1964).

ABBL: Chukchi Sea; Pribilof Islands; Bristol Bay; Gulf of Alaska; Cook Inlet; southeastern Alaska.

Osmorus eperlanus (Linnaeus). Rainbow smelt, Arctic smelt, toothed smelt.

Cold-temperate, boreal, and arctic marine and fresh waters of the northern hemisphere (Andriyashev, 1937, 1954; Gilbert, 1895; Jordan and Gilbert, 1899; Leim and Scott, 1966; McAllister, 1963; Scofield, 1899; Shmidt, 1950; Ueno, 1970; Walters, 1955; Wilimovsky, 1954, 1964).

ABBL: Bristol Bay; Alaska Peninsula; Yukon River.

Spirinchus starksii (Fisk). Night smelt.

Southeastern Alaska-central California (Dryfoos, 1961; McAllister, 1963).

Spirinchus thaleichthys (Ayres). Longfin smelt.

Hinchinbrook Island; Nushagak River; Prince William Sound-San Francisco Bay (Dryfoos, 1961; Gilbert, 1895; Jordan and Gil-

bert, 1899; McAllister, 1963; McPhail and Lindsey, 1970).

ABBL: Shelikof Strait; Cook Inlet.

Thaleichthys pacificus (Richardson). Eulachon, Pacific smelt (Russ.).

Eastern Pacific; Pribilof Islands; Bering Sea-California (Andriyashev, 1937; Carl et al., 1959; Gilbert, 1895; Grinols, 1965; Jordan and Gilbert, 1899; McAllister, 1963; McPhail and Lindsey, 1970; Odemar, 1964; Taylor, 1967a; Wilimovsky, 1954).

ABBL: Shelikof Strait; Cook Inlet; Gulf of Alaska; southeastern Alaska.

ARGENTINIDAE — argentines

**Nansenia candida* Cohen. White pencilsmelt.

British Columbia-California (Grinols, 1965; McAllister, 1960, 1961; Taylor, 1967a, 1967b).

BATHYLAGIDAE — deepsea smelts

Bathylagus borealis Gilbert.

Bering Sea (Gilbert, 1895; Jordan and Gilbert, 1899).

Bathylagus callorhini (Lucas).

In fur seal stomachs between lat 54° 42'N to 52° 29'N and long 167° 41'W to 170° 53'W (Jordan and Gilbert, 1899).

Bathylagus milleri Jordan and Gilbert. Stout blacksmelt.

Kurilo-Kamchatkan Trench; Sea of Okhotsk; Bering Sea-California (Clemens and Wilby, 1961; Cohen, 1966; Grinols, 1965; Rass, 1954; Taylor, 1967a; Ueno, 1970; Wilimovsky, 1954).

Bathylagus ochotensis Shmidt. Okhotsk blacksmelt.

Sea of Okhotsk; Gulf of Alaska-British Columbia; Oregon (Grinols, 1965; LeBrasseur, 1964; McAllister, 1960, 1961; Shmidt, 1950; Taylor, 1967a, 1967b).

Bathylagus pacificus Gilbert. Pacific blacksmelt.

Kurilo-Kamchatkan Trench; Sea of Okhotsk; Bering Sea-California (Clemens and Wilby, 1961; Grinols, 1965; Rass, 1954; Taylor, 1967a; Ueno, 1970).

Bathylagus stilbius (Gilbert). Smoothtongue. Kurilo-Kamchatkan Trench; Sea of Okhotsk; Bering Sea-Central America (Alverson, 1951; Clemens and Wilby, 1961; Cohen, 1956, 1964; Gilbert, 1895; Grinols, 1965; Jordan and Gilbert, 1899; Lavenberg and Fitch, 1966; Rass, 1954; Shmidt, 1950; Taylor, 1967a; Ueno, 1970; Wilimovsky, 1958).

ABBL: Shelikof Strait; Prince William Sound; Gulf of Alaska; southeastern Alaska.

OPISTHOPROCTIDAE — spookfishes

Macropinna microstoma Chapman. Barreleye, Pacific barreleye. Gulf of Alaska-California (Grinols, 1965; Taylor, 1967a; Ueno, 1970; Wilimovsky, 1954).

ESOCIDAE — pikes

Esox lucius Linnaeus. Northern pike. Eurasia; Arctic Alaska; northeastern United States; circumpolar in fresh waters (Carl et al., 1959; McPhail and Lindsey, 1970; Walters, 1955; Wilimovsky, 1954). ABBL: Yukon River; Alaska Peninsula.

UMBRIDAE (DALLIIDAE) — mudminnows

Dallia pectoralis Bean. Alaska blackfish. Siberia; St. Matthew and St. Lawrence Islands (Bering Sea); Arctic Alaska-central Alaska (Jordan and Gilbert, 1899; McPhail and Lindsey, 1970; Walters, 1955; Wilimovsky, 1954). ABBL: Alaska Peninsula; Yukon River delta.

GONOSTOMATIDAE — lightfishes

Cyclothona atraria Gilbert. Black bristlemouth. Gulf of Alaska-California (Wilimovsky, 1954).

Cyclothona pacifica Mukhacheva. Smalltooth bristlemouth.

Kurilo-Kamchatkan Trench; Sea of Okhotsk; Arctic Ocean; Bering Sea-California (Gilbert, 1895; Grinols, 1965; Jordan and Gilbert, 1899; Leim and Scott, 1966; Muk-

hacheva, 1954, 1964; Rass, 1954; Shmidt, 1950; Taylor, 1967a; Ueno, 1970; Wilimovsky, 1954).

Cyclothona pallida Brauer. Bicolored bristlemouth.

Kurilo-Kamchatkan Trench; Bering Sea-California-South America (Grinols, 1965; Rass, 1954; Ueno, 1970).

Cyclothona signata Garman. Showy bristlemouth.

Kurilo-Kamchatkan Trench; Bering Sea; cosmopolitan (Briggs, 1960; Grinols, 1965; Rass, 1954).

Gonostoma gracile Günther.

Japan; Bering Sea-California; mid-Pacific (Grinols, 1965; Mead and Taylor, 1953; Ueno, 1970).

STERNOPTYCHIDAE — hatchetfishes

**Argyroplectus lychnus* Garman.

British Columbia-South America; Atlantic Ocean (Clemens and Wilby, 1961; Grinols, 1965; Schultz, 1964).

MELANOSTOMIATIDAE — scaleless dragonfishes

**Aristostomias scintillans* (Gilbert). Loosejaw, shiny loosejaw.

British Columbia-Baja California (Clemens and Wilby, 1961; Grinols, 1965; McAllister, 1960, 1961; Taylor, 1967a).

**Bathophilus flemingi* Aron and McCrary. High-fin dragonfish.

British Columbia-Washington (Clemens and Wilby, 1961; Taylor, 1967a).

Tactostoma macropus Bolin. Longfin dragonfish.

Japan; Gulf of Alaska-California (Grinols, 1965; LeBrasseur, 1964; McAllister, 1960, 1961; Mead and Taylor, 1953; Taylor, 1967a; Ueno, 1970).

ABBL: southeastern Alaska.

CHAULIODONTIDAE — viperfishes

Chauliodus macouni Bean. Viperfish. Kurilo-Kamchatkan Trench; Sea of Okhotsk:

Bering Sea-California (Gilbert, 1895; Grinols, 1965; Rass, 1954; Taylor, 1967a; Ueno, 1970; Wilimovsky, 1954).
ABBL: Gulf of Alaska; southeastern Alaska.

ALEPOCEPHALIDAE — slickheads

Ericara salmonicum Gill and Townsend. Deep-sea slickhead.
Bering Sea-California (Grey, 1956; Grinols, 1965; Jordan and Gilbert, 1899; Wilimovsky, 1954).

**Sagamichthys abei* Parr.

Antarctic Ocean; northwestern Pacific; British Columbia; southern California (Grinols, 1965; Taylor, 1967a, 1967b; Ueno, 1970).

PARALEPIDIDAE — barracudinas

**Lestidium ringens* (Jordan and Gilbert). Slender barracudina.
British Columbia-Mexico (Aron, 1962; Clemens and Wilby, 1961; Grinols, 1965; Taylor, 1967a).
**Notolepis rissoii* (Bonaparte).
Japan; British Columbia-California (Clemens and Wilby, 1961; Grinols, 1965; Mead and Taylor, 1953; Rofen, 1966; Taylor, 1967a, 1967b; Ueno, 1970).

ALEPISAUROIDAE — lancetfishes

Alepisaurus richardsonii Bleeker. Pacific lancetfish.
Japan; Sea of Okhotsk; Bering Sea; Pacific Ocean (Fitch, 1951; Gibbs, 1960; Grinols, 1965; Isakson et al., 1971; Jordan and Gilbert, 1899; Rass, 1954; Ueno, 1970; Wilimovsky, 1954, 1964).

ANOPTERIDAE — daggertoohs

Anopterus pharao Zugmayer. Daggertooh.
Japan; Kamchatka; Bering Sea; Aleutian Islands-California. Worldwide, antitropical (Clemens and Wilby, 1961; Grinols, 1965; Hubbs, Mead, and Wilimovsky, 1953; Leim and Scott, 1966; Taylor, 1967a; Ueno, 1970; Welander, Alverson, and Bergman, 1957;

Wilimovsky, 1964).
ABBL: Gulf of Alaska.

SCOPELARCHIDAE — pearleyes

Neoscopelarchoides dentatus Chapman. Pearl-eye, northern pearleye.
Gulf of Alaska-Mexico (Grinols, 1965; Marshall, 1955; Taylor, 1967a; Wilimovsky, 1954).

SCOPELOSAURIDAE

**Scopelosaurus harryi* (Mead).
Japan; British Columbia (Taylor, 1967a, 1967b; Ueno, 1970).

MYCTOPHIDAE — lanternfishes

Benthosema glaciale (Reinhardt).
Arctic Alaska; North Atlantic (Leim and Scott, 1966; Wilimovsky, 1954).
**Ceratoscopelus townsendi* (Eigenmann and Eigenmann). Dogtooth lampfish.
Japan; British Columbia-southern California; Hawaii; circumglobal (Aron, 1962; Clemens and Wilby, 1961; Grinols, 1965; Mead and Taylor, 1953; Ueno, 1970).

Diaphus thjeta Eigenmann and Eigenmann. California headlightfish.
Aleutian Islands; Gulf of Alaska-Baja California; tropical mid-Pacific (Aron, 1962; Grinols, 1965; LeBrasseur, 1964; McAllister, 1960, 1961; Taylor, 1967a; Ueno, 1970; Wilimovsky, 1954).

ABBL: southeastern Alaska.

**Hicrops erockeri* (Bolin).
British Columbia-California (Aron, 1962; Grinols, 1965).

Hierops thompsoni (Chapman). Bigeye lanternfish.
Kurile-Kamchatkan Trench; Commander Islands; Gulf of Alaska-Baja California (Aron, 1962; Grinols, 1965; Rass, 1954; Taylor, 1967a; Ueno, 1970; Wilimovsky, 1954).

Hygophum reinhardti (Lütken). Broadhead lanternfish.
Atlantic, Pacific, Indian Oceans; Gulf of

Alaska; Gulf of California (Grinols, 1965; Lavenberg and Fitch, 1966; Wilimovsky, 1954).

Lampanyctus beringensis Schmidt.

Bering Sea (Andriyashov, 1937; Grinols, 1965; Wilimovsky, 1954).

Lampanyctus jordani Gilbert.

Japan; Kurilo-Kamchatkan Trench; Bering Sea; Gulf of Alaska-California (Grinols, 1965; Rass, 1954; Ueno, 1970; Wilimovsky, 1954; Wisner, 1959).

Lampanyctus nannochir (Gilbert). Garnet lampfish.

Japan; Sea of Okhotsk; Bering Sea-California (Grinols, 1965; Jordan and Gilbert, 1899; Mead and Taylor, 1953; Rass, 1954; Shmidt, 1950; Taylor, 1967a; Ueno, 1970; Wilimovsky, 1954).

Lampanyctus regalis (Gilbert). Pinpoint lampfish.

Gulf of Alaska-Mexico (Grinols, 1965; LeBrasseur, 1964; Taylor, 1967a; Ueno, 1970; Wilimovsky, 1954).

ABBL: southeastern Alaska.

Lampanyctus ritteri Gilbert. Broadfin lanternfish.

Aleutian Islands-Mexico (Aron, 1962; Clemens and Wilby, 1961; Grinols, 1965; Taylor, 1967a).

**Notoscopelus resplendens* (Richardson). Patchwork lampfish.

Circumglobal; Japan; British Columbia-California (Clemens and Wilby, 1961; Grinols, 1965; Mead and Taylor, 1953).

Stenobrachius leucopsarus (Eigenmann and Eigenmann). Northern lampfish.

Japan; Kurilo-Kamchatkan Trench; Bering Sea; Gulf of Alaska-California (Aron, 1962; Gilbert, 1895; Grinols, 1965; LeBrasseur, 1964; McAllister, 1960, 1961; Mead and Taylor, 1953; Rass, 1954; Taylor, 1967a; Ueno, 1970; Wilimovsky, 1954).

ABBL: Gulf of Alaska; southeastern Alaska.

Symbophorus californiense (Eigenmann and Eigenmann). Bigfin lanternfish.

Japan; Alaska-Mexico (Bolin, 1959; Clemens and Wilby, 1961; Grinols, 1965; Mead and Taylor, 1953; Ueno, 1970).

Tarletonbeania crenularis (Jordan and Gilbert).

Blue lanternfish.

Japan; Gulf of Alaska-Mexico (Aron, 1962; Bekker, 1964; Grinols, 1965; McAllister, 1960, 1961; Taylor, 1967a; Ueno, 1970; Wilimovsky, 1954).

ABBL: southeastern Alaska.

Tarletonbeania taylori Mead.

Japan; northwestern and northeastern Pacific Ocean; British Columbia (Grinols, 1965; Taylor, 1967a; Ueno, 1970; Wisner, 1959).

CYPRINIDAE — minnows and carps

Couesius plumbeus (Agassiz). Lake chub.

Northern North America (McPhail and Lindsey, 1970; Walters, 1955; Wilimovsky, 1954).

ABBL: Yukon River.

CATOSTOMIDAE — suckers

Catostomus catostomus (Forster). Longnose sucker.

Siberia; Arctic Alaska-Great Lakes (Carl et al., 1959; Jordan and Gilbert, 1899; McPhail and Lindsey, 1970; Vladkyov, 1933; Wilimovsky, 1954).

ABBL: Yukon River; Alaska Peninsula; south-central Alaska; Kenai Peninsula.

PERCOPSIDAE — trout-perches

Percopsis omiscomaycus (Walbaum). Trout-perch.

Yukon River; North America north of Kansas and West Virginia (Carl et al., 1959; McPhail and Lindsey, 1970; Morrow, 1965; Walters, 1955).

ABBL: Yukon River.

BATRACHOIDIDAE — toadfishes

**Porichthys notatus* Girard. Plainfin midshipman.

Southeastern Alaska-Baja California (Alaska record not verified) (Wilimovsky, 1954).

GOBIESOCIDAE — clingfishes

Gobiesox maeandricus (Girard). Northern clingfish.
Southeastern Alaska-California (Briggs, 1955; Clemens and Wilby, 1961; Wilimovsky, 1954).
ABBL: southeastern Alaska.

ONEIRODIDAE — dreamers

**Chaenophryne parviconus* Regan and Trewavas. In temperate oceans⁴ (Grinols, 1965; Taylor, 1967a).

Oneirodes acanthias (Gilbert). Pacific dreamer. Gulf of Alaska-Mexico (Grinols, 1965; Taylor, 1967a, 1967b; Ueno, 1970; Wilimovsky, 1954).

Oneirodes bulbosus Chapman.

Bering Sea and Pacific Ocean north of 42°N (see footnote 4).

**Oneirodes eschrichti* Lütken.

British Columbia (Grinols, 1965; Taylor, 1967a, 1967b; see footnote 4).

Oneirodes thompsoni (Schultz).

Bering Sea and Pacific Ocean north of 42°N (see footnote 4).

MORIDAE — longfin cods

Antimora rostrata Günther. Longfin cod. Cosmopolitan; Japan; Kurilo-Kanchatkan Trench; Bering Sea-California; Central America; tropical mid-Pacific (Grey, 1956; Grinols, 1965; Jordan and Gilbert, 1899; Leim and Scott, 1966; Rass, 1954; Schroeder, 1940; Ueno, 1970; Wilimovsky, 1954).

GADIDAE — codfishes and hakes

Arctogadus borisovi Drjagin. Toothed cod. Kara Sea-Point Barrow (Svetovidov, 1948; Walters, 1955).

**Arctogadus glacialis* (Peters). Polar cod. Northern Canada-Greenland (Walters, 1955).

⁴ Personal communication, 1971, T. W. Pietsch, Department of Biological Sciences, University of Southern California, Los Angeles, Calif. 90007.

Boreogadus saida (Lepechin). Arctic cod, saika (Russ.).

Circumpolar; Anadyr Gulf; northern Bering Sea; Chukchi Sea; Hudson Bay (Andriyashov, 1937, 1954; Jordan and Gilbert, 1899; Leim and Scott, 1966; Scofield, 1899; Svetovidov, 1948; Vladkyov, 1933; Walters, 1955; Wilimovsky, 1954).

ABBL: Chukchi Sea; Point Barrow.

Eleginuss gracilis (Tilesius). Saffron cod, nava-ga (Russ.).

Yellow Sea; Sea of Japan; Sea of Okhotsk; Avatcha Bay; Bering Sea; Chukchi Sea; Aleutian Islands; Gulf of Alaska (Andriyashov, 1937, 1954; Popov, 1933; Shmidt, 1950; Svetovidov, 1948; Ueno, 1970; Wilimovsky, 1954, 1964).

ABBL: Chukchi Sea; Kuskokwim Bay.

Gadus morhua macrocephalus Tilesius. Pacific cod, treska (Russ.).

Yellow Sea-Sea of Okhotsk; Kuriles; Anadyr Gulf; Bering Sea-St. Lawrence Island; Aleutian Islands; Gulf of Alaska-California (Andriyashov, 1937, 1954; Grinols, 1965; Isakson et al., 1971; Jordan and Gilbert, 1899; McAllister, 1960; Okada, 1955; Pin kas, 1967; Roedel 1953; Scofield, 1899; Shmidt, 1950; Svetovidov, 1948; Taylor, 1967a; Ueno, 1970; Vladkyov, 1933; Wilimovsky, 1954, 1964).

ABBL: Gulf of Alaska; Prince William Sound; Icy Bay; Yakutat; southeastern Alaska.

Lota lota (Linnaeus). Burbot.

Europe; northern Asia; North America (McPhail and Lindsey, 1970; Svetovidov, 1948; Walters, 1955; Wilimovsky, 1954).

ABBL: Yukon River; Susitna River basin; Copper River basin.

Merluccius productus (Ayres). Pacific hake.

Gulf of Alaska-Gulf of California (Grinols, 1965; Roedel, 1953; Svetovidov, 1948; Taylor, 1967a; Wilimovsky, 1954).

ABBL: southeastern Alaska.

Microgadus proximus (Girard). Pacific tomcod. Aleutian Islands-California (Roedel, 1953; Svetovidov, 1948; Wilimovsky, 1954, 1964).

ABBL: Kodiak vicinity; Prince William Sound; southeastern Alaska.

Theragra chalcogramma (Pallas). Walleye pollock, Pacific pollock, mintai (Russ.).
Sea of Japan; Sea of Okhotsk; Petropavlovsk; Bering Strait; Bering Sea; Aleutian Islands-Baja California (Andriyashev, 1937, 1954; Clemens and Wilby, 1961; Grinols, 1965; Isakson et al., 1971; Jordan and Gilbert, 1899; Okada, 1955; Popov, 1933; Scofield, 1899; Shmidt, 1950; Svetovidov, 1948; Taylor, 1967a; Ueno, 1970; Wilimovsky, 1954, 1964).
ABBL: Bering Sea; Gulf of Alaska; southeastern Alaska.

OPHIDIIDAE — brotulas and cusk eels

Brosmophycis marginata (Ayres). Red brotula. Alaska-California (Clemens and Wilby, 1961; Gilbert and Thompson, 1905; Grinols, 1965; Wilimovsky, 1954).

Spectrunculus radcliffei Jordan and Thompson. Japan; North Atlantic.⁵
ABBL: Cook Inlet. Alaska.

ZOARCIDAE — eelpouts

**Aprodon cortezianus* Gilbert. Bigfin eelpout. British Columbia-California (Grinols, 1965).

Bothrocara brunneum (Bean). Twoline eelpout. Sea of Okhotsk; Sakhalin Island; Olytorsky Bay; Bering Sea-California (Bayliff, 1959; Grinols, 1965; Shmidt, 1950; Westrheim and Pletcher, 1966).

Bothrocara molle Bean. Soft eelpout, pighead eelpout, short-snout eelpout. Bering Sea-Mexico (Andriyashev, 1937; Bayliff, 1959; Clemens and Wilby, 1961; Grinols, 1965; Jordan and Gilbert, 1899; Shmidt, 1950; Westrheim and Pletcher, 1966; Wilimovsky, 1954).

Bothrocara pusillum (Bean). Alaska eelpout. Bering Sea-southeastern Alaska (Hubbs and Schultz, 1941; Jordan and Gilbert, 1899; Wilimovsky, 1954).

ABBL: Gulf of Alaska.

⁵ Identified by Daniel M. Cohen, Director, National Marine Fisheries Service, National Systematics Laboratory, U.S. National Museum, Washington, D.C. 20560. (Personal communication, September 21, 1965.)

**Commandorella popovi* Tarantzev and Andriyashev.

Commander Islands (Andriyashev, 1937).

**Derepodichthys alepidotus* Gilbert.

British Columbia (Grinols, 1965).

Embryx crotalina (Gilbert). Snakehead eel-pout.

Shumagin Islands-California (Bayliff, 1959; Grinols, 1965; Wilimovsky, 1954).

Gymnelis bilabrus Andriyashev.

Bering Strait (Andriyashev, 1937).

Gymnelis hemifasciatus Andriyashev.

Cape Olytorsky; St. Lawrence Island (Andriyashev, 1937, 1954; Ueno, 1970).

Gymnelis viridis (Fabricius). Fish doctor.

Sea of Okhotsk; Anadyr Gulf; Chukchi Sea; Bering Sea; Arctic Ocean; circumpolar; Aleutian Islands; Gulf of Alaska (Andriyashev, 1937, 1954; Jordan and Gilbert, 1899; Leim and Scott, 1966; Shmidt, 1950; Vladkov, 1933; Walters, 1955; Wilimovsky, 1954, 1964).

Gymnelopsis stigma (Lay and Bennett).

Bering Sea (Jordan and Gilbert, 1899; Wilimovsky, 1954).

**Lycenchelys albeolis* Andriyashev.

Kurilo-Kamchatkan Trench (Andriyashev, 1958; Ueno, 1970).

**Lycenchelys birsteini* Andriyashev.

Kurilo-Kamchatkan Trench (Andriyashev, 1958; Ueno, 1970).

**Lycenchelys camchaticus* (Gilbert and Burke).

Eastern Kamchatka; Commander Islands (Andriyashev, 1937, 1955a, 1958).

Lycenchelys jordani (Evermann and Goldsborough).

Southeastern Alaska-Oregon (Bayliff, 1959; Grey, 1956; Grinols, 1965; Wilimovsky, 1954).

**Lycenchelys microporus* Andriyashev.

Northwestern Bering Sea (Andriyashev, 1955a).

**Lycenchelys pliciferus* Andriyashev.

Commander Islands (Andriyashev, 1955a).

**Lycenchelys ratmanovi* Andriyashev.

Petropavlovsk (Andriyashev, 1955a).

- **Lycenchelys uschakovi* Andriashev.
Kurilo-Kamchatkan Trench (Andriyashev, 1955a; Ueno, 1970).
- **Lycenchelys vitiazi* Andriashev.
Kurilo-Kamchatkan Trench (Andriyashev, 1955a).
- **Lycenchelys volki* Andriashev.
Commander Islands (Andriyashev, 1955a).
- Lycodalepis turneri* (Bean).
Western Bering Sea; Norton Sound; Point Barrow (Jordan and Gilbert, 1899; Scofield, 1899).
- Lycodapus extensus* Gilbert.⁶
Bering Sea; Aleutian Islands (Gilbert, 1895; Jordan and Gilbert, 1899; Wilimovsky, 1954).
- Lycodapus fierasfer* Gilbert. Blackmouth eelpout.
Bering Sea; Aleutian Islands-Panama (Bayliff, 1959; Gilbert, 1890; Grey, 1956; Grinols, 1965; Wilimovsky, 1954).
- Lycodapus grossidens* Gilbert.
Bering Sea; southeastern Alaska; Oregon (Grinols, 1965; Wilimovsky, 1954).
ABBL: Prince William Sound; southeastern Alaska.
- Lycodapus mandibularis* Gilbert. Pallid eelpout.
Southeastern Alaska-California (Alverson, 1951; Clemens and Wilby, 1961; Grinols, 1965; Hubbs and Schultz, 1941; Wilimovsky, 1954).
- Lycodapus parviceps* Gilbert.
Bering Sea; Aleutian Islands (Gilbert, 1895; Jordan and Gilbert, 1899; Wilimovsky, 1954).
- Lycodes agnostus* Jensen.
Anadyr Gulf; Chukchi Sea; Bering Sea; Arctic Alaska; Barents Sea; circumpolar (Andriyashev, 1937; Wilimovsky, 1954).
- **Lycodes bathybius* Shmidt.
Southern Kamchatka (Shmidt, 1950).
- Lycodes brevipes* Bean. Shortfin eelpout.
Sea of Okhotsk; Bering Sea; Alaska-Oregon
- (Andriyashev, 1937; Gilbert and Thomsen, 1905; Grinols, 1965; Jordan and Gilbert, 1899; Ueno, 1970; Wilimovsky, 1954).
ABBL: Alaska Peninsula; Kodiak Island; Gulf of Alaska; southeastern Alaska.
- **Lycodes camchatcicus* Gilbert and Burke.
Petropavlovsk; Commander Islands (Andriyashev, 1937).
- **Lycodes concolor* Gill and Townsend.
Bering Sea (Jordan and Gilbert, 1899; Wilimovsky, 1954).
- Lycodes diapterus* Gilbert. Black eelpout.
Sea of Japan; Commander Islands; Bering Sea-California (Andriyashev, 1937; Bayliff, 1959; Grinols, 1965; Wilimovsky, 1954).
ABBL: Kodiak Island; southeastern Alaska.
- Lycodes digitatus* Gill and Townsend.
Bering Sea (Jordan and Gilbert, 1899).
- **Lycodes knipowitschi* Popov.
Sea of Okhotsk; Kamchatka; Anadyr Gulf; Bering Sea; Chukchi Sea (Andriyashev, 1937; Shmidt, 1950; Ueno, 1970; Walters, 1955).
- Lycodes mucosus* Richardson.
Anadyr Gulf; Bering Sea; Point Barrow (Andriyashev, 1954; Walters, 1955).
ABBL: Point Barrow.
- Lycodes palearis* Gilbert. Wattled eelpout.
Japan; Sea of Okhotsk; Anadyr Gulf; Bering Sea; Chukchi Sea; Arctic Alaska; British Columbia-Washington (Andriyashev, 1937, 1954; Bayliff, 1959; Grinols, 1965; Jordan and Gilbert, 1899; Ueno, 1970; Walters, 1955; Wilimovsky, 1954).
ABBL: Gulf of Alaska; southeastern Alaska.
- Lycodes polaris* (Sabine). Canadian eelpout.
Circumpolar in the Arctic Ocean (Andriyashev, 1954).
- Lycodes raridens* Tarantsov and Andriashev.
Sparse toothed lycod (Russ.).
Sea of Okhotsk; St. Matthew Island; Bering Sea; Bering Strait; Chukchi Sea; Arctic Alaska (Andriyashev, 1937, 1954; Shmidt, 1950; Ueno, 1970; Walters, 1955; Wilimovsky, 1954).
- **Lycodes soldatovi* Tarantsov and Andriashev.
Sea of Okhotsk; Olyutorsky Gulf (Andriyashev, 1937; Shmidt, 1950; Ueno, 1970; Walters, 1955).

⁶The genus *Lycodapus* is in need of revision. Apparently some nominal species represent different sexes of the same species. One species (*L. grossidens* ?) is abundant in Lynn Canal, southeastern Alaska.

Lycodes turneri Bean. Polar eelpout.
Kara Sea; northern Bering Sea; Arctic Alaska; Gulf of St. Lawrence; western Greenland (Leim and Scott, 1966; Walters, 1955; Wilimovsky, 1954).

Lycodopsis pacifica (Collett). Blackbelly eelpout.

Alaska-California (Bayliff, 1959; Grinols, 1965; Wilimovsky, 1954).

ABBL: Gulf of Alaska; Yakutat; southeastern Alaska.

**McIanostigma pammelas* Gilbert. Black eelpout.

British Columbia-southern California (Grinols, 1965, 1966c).

Nalbantiekhys elongatus Schultz.

Bering Sea (Schultz, 1967).

**Taranetzella lyoderma* Andriyashev.

Olytorsk Bay (Andriyashev, 1955a).

MACROURIDAE — rattails

Coryphaenoides aerolepis (Bean). Roughscale rattail.

Japan; Kurilo-Kamchatkan Trench; Sea of Okhotsk; Bering Sea-California (Grinols, 1965; Jordan and Gilbert, 1899; Okada, 1955; Okamura, 1970; Rass, 1954; Ueno, 1970; Wilimovsky, 1954).

Coryphaenoides cinereus (Gilbert).

Sea of Okhotsk; Kurilo-Kamchatkan Trench; East Kamchatka; Bering Sea; Unalaska Island (Jordan and Gilbert, 1899; Okamura, 1970; Rass, 1954; Shmidt, 1950; Ueno, 1970; Wilimovsky, 1954).

Coryphaenoides clarki (Jordan and Gilbert).

Bering Sea (Jordan and Gilbert, 1899; Makushok, 1964; Wilimovsky, 1954).

**Coryphaenoides cyclolepis* (Gilbert). Smooth-scale rattail.

British Columbia (Clemens and Wilby, 1961; Grinols, 1965).

Coryphaenoides filifera Gilbert. Filamented rattail.

Aleutian Islands; British Columbia (Clemens and Wilby, 1961; Grinols, 1965; Isakson et al., 1971).

ABBL: Gulf of Alaska.

Coryphaenoides firmisquamis (Gill and Townsend). Strong-scaled rattail.

Bering Sea (Jordan and Gilbert, 1899; Wilimovsky, 1954).

Coryphaenoides lepturus (Gill and Townsend).

Bering Sea (Jordan and Gilbert, 1899; Wilimovsky, 1954).

Coryphaenoides pectoralis (Gilbert). Giant rattail.

Japan; Sea of Okhotsk; Kurilo-Kamchatkan Trench; Pribilof Islands; Bering Sea-Oregon (Andriyashev, 1937; Gill and Townsend, 1897; Grinols, 1965; Jordan and Gilbert, 1899; Okamura, 1970; Rass, 1954; Shmidt, 1950; Ueno, 1970; Wilimovsky, 1954).

Coryphaenoides serrula (Bean).

Southeastern Alaska (Wilimovsky, 1954).

Coryphaenoides spinulosus (Gilbert and Burke).

Bering Sea (Ueno, 1970; Wilimovsky, 1954).

Coryphaenoides suborbitalis (Gill and Townsend).

Bering Sea (Wilimovsky, 1954).

SCOMBERESOCIDAE — sauries

Cololabis saira (Brevoort). Pacific saury.

Korea; Japan; Gulf of Alaska-southern California (Grinols, 1965; LeBrasseur, 1964; Okada, 1955; Ueno, 1970; Wilimovsky, 1954).

MELAMPHAEIDAE — melamphids, bigscales

Melamphaes lugubris Gilbert. Highsnout melamphid.

Bering Sea-Baja California (Ebeling, 1962; Gilbert, 1895; Grinols, 1965; Jordan and Gilbert, 1899; Taylor, 1967a; Wilimovsky, 1954).

ABBL: Gulf of Alaska.

Poromitra crassiceps (Günther). Crested bigscale.

Atlantic Ocean; Eastern Aleutians-Central and South America (Grinols, 1965; Kobayashi and Ueno, 1966; Taylor, 1967a; Ueno, 1970; Wilimovsky, 1954).

Scopeloberyx nycterus (Gilbert).

Kurilo-Kamchatkan Trench; Gulf of Alaska-California (Rass, 1954; Ueno, 1970; Wilimovsky, 1954).

ANOPLOGASTERIDAE

**Anoplogaster cornuta* Valenciennes.

Widespread bathypelagic; Oregon-Gulf of Panama; Atlantic Ocean (Grinols, 1966a).

ZEIDAE — dories

Alloeyttus verrucosus (Gilchrist). Coster dory.

Atlantic Ocean; Japan; Aleutian Islands; British Columbia (Clemens and Wilby, 1961; Grinols, 1965; Kobayashi, Mikawa, and Ito, 1968; Kobayashi and Ueno, 1966; Ueno, 1970; Welander, Johnson, and Hajny, 1957).

LAMPRIDAE — opahs

Lampris regius (Bonnaterre). Opah.

Japan; Gulf of Alaska-California; cosmopolitan (Grinols, 1965; Leim and Scott, 1966; Ueno, 1970; Wilimovsky, 1954).

TRACIPTERIDAE — ribbonfishes

Trachipterus altivelis Kner. King-of-the-salmon.

Eastern Pacific; Alaska-South America, offshore (Grinols, 1965).

GASTEROSTEIDAE — sticklebacks

Gasterosteus aculeatus Linnaeus. Threespine stickleback.

Yellow Sea; Sea of Japan; Sea of Okhotsk; Bering Sea-Baja California; northern Europe (Andriyashev, 1954; Carl et al., 1959; Isakson et al., 1971; Jordan and Gilbert, 1899; LeBrasseur, 1964; Leim and Scott, 1966; McPhail and Lindsey, 1970; Okada, 1955; Popov, 1933; Scofield, 1899; Shmidt, 1950; Ueno, 1970; Walters, 1955; Wilimovsky, 1954, 1964).

ABBL: Alaska Peninsula; Kodiak Island;

Kenai Peninsula; Prince William Sound; southeastern Alaska.

Pungitius pungitius (Linnaeus). Ninespine stickleback.

Yellow Sea-Bering Sea; Arctic Alaska; Aleutian Islands-British Columbia (Andriyashev, 1954; Gilbert, 1895; Jordan and Gilbert, 1899; Leim and Scott, 1966; McPhail and Lindsey, 1970; Popov, 1933; Scofield, 1899; Ueno, 1970; Walters, 1955; Wilimovsky, 1954, 1964).

ABBL: Alaska Peninsula; Yukon drainage.

AULORHYNCHIDAE — tubesnouts

Aulorhynchus flavidus Gill. Tube-snout.

Southeastern Alaska-Baja California (Wilimovsky, 1954).

ABBL: southeastern Alaska.

SYNGNATHIDAE — pipefishes, sea horses

Syngnathus griseolineatus Ayres. Bay pipefish.

Southeastern Alaska-southern California (Wilimovsky, 1954).

SCORPAENIDAE — scorpionfishes and rockfishes

Sebastodes aleutianus (Jordan and Evermann). Rougheye rockfish.

Aleutian Islands-California (Barsukov, 1964; Grinols, 1965; Isakson et al., 1971; Jordan and Gilbert, 1899; Phillips, 1957; Taylor, 1967a; Wilimovsky, 1954).

ABBL: Aleutian Islands; Gulf of Alaska; southeastern Alaska.

Sebastodes alutus (Gilbert). Pacific ocean perch, muddy bass (Russ.).

Honshu-Cape Olytorsky; Bering Sea-California (Andriyashev, 1937; Barsukov, 1964; Clemens and Wilby, 1961; Gilbert, 1895; Grinols, 1965; Isakson et al., 1971; Jordan and Gilbert, 1899; Phillips, 1957; Taylor, 1967a; Ueno, 1970; Wilimovsky, 1954).

ABBL: Bering Sea; Shumagin Islands; Gulf of Alaska; Yakutat; southeastern Alaska.

Sebastodes auriculatus Girard. Brown rockfish. Southeastern Alaska-Baja California (Phillips, 1957; Wilimovsky, 1954).
ABBL: southeastern Alaska.

**Sebastodes aurora* (Gilbert). Aurora rockfish. Vancouver Island-California (Grinols, 1965; Heyamoto and Hitz, 1962; Phillips, 1957; Westrheim, 1968).

Sebastodes babcocki (Thompson). Redbanded rockfish. Aleutian Islands-California (Best and El-dridge, 1969; Heyamoto and Hitz, 1962; Rosenblatt and Chen, 1972; Thompson, 1915b; Westrheim, 1965).
ABBL: Gulf of Alaska; southeastern Alaska.

Sebastodes brevispinis (Bean). Silvergray rockfish. Bering Sea-California (Barsukov, 1964; Grinols, 1965; Phillips, 1957; Taylor, 1967a; Wilimovsky, 1954).

Sebastodes borealis Barsukov. Kamchatka; northwestern Bering Sea; Aleutian Islands-Puget Sound and possibly Oregon (Barsukov, 1970; Tsuyuki and Westerheim, 1970).

Sebastodes caninus Richardson. Copper rockfish. Kenai Peninsula-California (Phillips, 1957; Westrheim, 1966a; Wilimovsky, 1954).
ABBL: Prince William Sound; southeastern Alaska.

Sebastodes ciliatus (Tilesius). Dusky rockfish. Bering Sea-Dixon Entrance (Isakson et al., 1971; Jordan and Gilbert, 1899; Taylor, 1967a; Westrheim, 1968; Wilimovsky, 1954).
ABBL: Aleutian Islands; Alaska Peninsula; Kodiak Island; southeastern Alaska.

Sebastodes erameri (Jordan). Darkblotched rockfish. Bering Sea-California (Grinols, 1965; Phillips, 1957; Taylor, 1967a; Wilimovsky, 1954).
ABBL: southeastern Alaska.

Sebastodes diploproa (Gilbert). Splitnose rockfish. Southeastern Alaska-Baja California (Grinols, 1965; Phillips, 1957).

Sebastodes elongatus Ayres. Greenstriped rockfish.

Montague Island; southeastern Alaska-Baja California (Grinols, 1965; Phillips, 1957; Taylor, 1967a; Westrheim, 1966a).
ABBL: Katlian Bay and Baranof Island in southeastern Alaska.

Sebastodes emphaeus (Starks). Puget Sound rockfish.

Puget Sound (Alverson and Welander, 1952; Hitz, 1965; Schultz, 1936).

ABBL: Kenai Peninsula; southeastern Alaska.

Sebastodes entomelas (Jordan and Gilbert). Widow rockfish.

Southeastern Alaska-California (Grinols, 1965; McAllister and Westrheim, 1965; Phillips, 1957; Taylor, 1967a).

ABBL: southeastern Alaska.

Sebastodes flavidus (Ayres). Yellowtail rockfish.

Southeastern Alaska-California (Grinols, 1965; Phillips, 1957; Taylor, 1967a; Westrheim, 1966b).

ABBL: southeastern Alaska.

**Sebastodes glaucescens* Hilgendorf.

Sea of Japan; northern Sea of Okhotsk; Commander Islands (Barsukov, 1964; Jordan and Gilbert, 1899; Shmidt, 1950; Ueno, 1970).

**Sebastodes goodei* (Eigenmann and Eigenmann). Chilipepper.

Vancouver Island; Oregon-Baja California (Grinols, 1965; Westrheim, 1965).

Sebastodes helvomaculatus Ayres. Rosethorn rockfish.

Southeastern Alaska-Baja California (Grinols, 1965; Heyamoto and Hitz, 1962; Phillips, 1957; Taylor, 1967a; Westrheim, 1965).

ABBL: Gulf of Alaska near Cape Fairweather and Yakutat.

**Sebastodes jordani* (Gilbert). Shortbelly rockfish.

British Columbia-Baja California (Grinols, 1965; Phillips, 1957; Welander and Alverson, 1954; Westrheim, 1967; Westrheim and Pletcher, 1966).

Sebastodes maliger (Jordan and Gilbert). Quillback rockfish.

Gulf of Alaska-California (Grinols, 1965; Phillips, 1957; Wilimovsky, 1954).

ABBL: Kenai Peninsula; Lituya Bay; southeastern Alaska.

Sebastodes melanops (Girard). Black rockfish.⁷
Aleutian Islands; Gulf of Alaska-California
(Grinols, 1965; Phillips, 1957; Taylor,
1967a; Wilimovsky, 1954, 1964).
ABBL: Southeastern Alaska.

Sebastodes melanostomus (Eigenmann and Eigen-
mann). Blackgill rockfish.
Bering Sea-Baja California (Barsukov, 1964;
Grinols, 1965; Phillips, 1957).

**Sebastodes miniatus* (Jordan and Gilbert). Vermilion rockfish.
Vancouver Island-Baja California (Grinols,
1965; Phillips, 1957).

**Sebastodes mystinus* (Jordan and Gilbert). Blue
rockfish.
Reported Bering Sea-Baja California, but
presence in Alaska doubtful, records prob-
ably *S. ciliatus* or *S. melanops* (Grinols,
1965; Phillips, 1957; Wilimovsky, 1954).

Sebastodes nebulosus Ayres. China rockfish.
Southeastern Alaska-California (Phillips,
1957; Wilimovsky, 1954).
ABBL: southeastern Alaska.

Sebastodes nigrocinetus Ayres. Tiger rockfish.
Southeastern Alaska-California (Grinols, 1965;
Phillips, 1957; Wilimovsky, 1954).
ABBL: Cape Resurrection, Kenai Peninsula.

Sebastodes paupeispinus Ayres. Bocaccio.
Southeastern Alaska; British Columbia-Baja
California (Davenport, 1966; Grinols, 1965;
Phillips, 1957; Taylor, 1967a; Westrheim,
1966b).
ABBL: southeastern Alaska.

Sebastodes pinniger (Gill). Canary rockfish.
Southeastern Alaska; Dixon Entrance; British
Columbia-Baja California (Clemens and
Wilby, 1961; Grinols, 1965; Phillips, 1957;
Taylor, 1967a; Westrheim, 1966b).
ABBL: southeastern Alaska.

Sebastodes polypinnis (Taranetz and Moiseev).
Northern rockfish, multi-spined bass (Russ.).
Eastern Kamchatka; Bering Sea-southeastern
Alaska (Andriyash, 1937; Ueno, 1970;

⁷ Records for the Aleutian Islands should be reexamined because all dark blue to black rockfish from the Aleutian Islands that we have seen are a blue form of *Sebastodes ciliatus* that resembles *S. melanops* and *S. mystinus*.

Westrheim and Tsuyuki, 1971; Wilimovsky,
1954).

ABBL: Bering Sea; Shumagin Islands; Gulf
of Alaska; Kenai Peninsula.

Sebastodes proriger (Jordan and Gilbert). Red-
stripe rockfish.

Bering Sea-California (Grinols, 1965; Isak-
son et al., 1971; Phillips, 1957; Taylor,
1967a; Wilimovsky, 1954).

ABBL: Gulf of Alaska; southeastern Alaska.

Sebastodes reedi (Westrheim and Tsuyuki). Yel-
lowmouth rockfish.

Sitka, Alaska-Cape Blanco, Oregon (Westr-
heim and Tsuyuki, 1967).

**Sebastodes rosaceus* Girard. Rosy rockfish.
Puget Sound-Baja California (Phillips, 1957).

Sebastodes ruber Ayres.
Gulf of Alaska-California (Grinols, 1965; Wili-
movsky, 1954).

Sebastodes ruberrimus (Cramer). Yelloweye
rockfish.

Gulf of Alaska-Baja California (Grinols, 1965;
Hubbs, 1959; Phillips, 1957; Taylor, 1967a).
ABBL: Gulf of Alaska; southeastern Alaska.

Sebastodes saxicola (Gilbert). Stripetail rockfish.
Southeastern Alaska-Baja California (Grinols,
1965; Phillips, 1957; Wilimovsky, 1954).

Sebastodes variegatus Quast. Harlequin rockfish.
Unimak Pass-Queen Charlotte Sound (Quast,
1971).

ABBL: Unimak Pass; Gulf of Alaska; south-
eastern Alaska; Queen Charlotte Sound.

Sebastodes wilsoni (Gilbert). Pygmy rockfish.
British Columbia-California (Grinols, 1965;
Harling, 1966; Phillips, 1957).
ABBL: Kenai Peninsula; southeastern Alaska.

Sebastodes zacentrus (Gilbert). Sharpechin rock-
fish.⁸

Northern Gulf of Alaska-California (Grinols,
1965; Phillips, 1957; Taylor, 1967a; Westr-
heim, 1965).

ABBL: Kodiak Island vicinity and central
Gulf of Alaska.

⁸ *Sebastodes zacentrus* closely resembles the newly
described *S. variegatus*. Alaska records of *S. zacentrus*
should be reexamined because there is evidence that the
two species have been confused.

Sebastolobus alascanus Bean. Shortspine thornyhead.

Bering Sea-Baja California (Andriyashev, 1937; Barsukov, 1964; Gilbert, 1895; Grinols, 1965; Isakson et al., 1971; Jordan and Gilbert, 1899; Phillips, 1957; Shmidt, 1950; Wilimovsky, 1954).

ABBL: Gulf of Alaska; Kenai Peninsula; Yakutat; Dry Bay; Lituya Bay; southeastern Alaska.

Sebastolobus altivelis Gilbert. Longspine thornyhead.

Aleutian Islands; Gulf of Alaska-Baja California (Barsukov, 1964; Gilbert, 1895; Grinols, 1965; Jordan and Gilbert, 1899; Phillips, 1957; Wilimovsky, 1954; Westrheim, 1968).

ABBL: southeastern Alaska.

**Sebastolobus macrochir* (Günther).

Japan-Cape Navarin; Sea of Okhotsk (Barsukov, 1964; Ueno, 1970).

HEXAGRAMMIDAE — greenlings

Hexagrammos decagrammus (Pallas). Kelp greenling.

Aleutian Islands; southeastern Alaska-California (Gilbert, 1895; Isakson et al., 1971; Quast, 1960; Wilimovsky, 1954).

ABBL: Shumagin Islands; Kodiak Island; Gulf of Alaska; Yakutat Bay; Lituya Bay; southeastern Alaska.

Hexagrammos lagocephalus (Pallas). Rock greenling.

Yellow Sea; Kuril Islands; Sea of Okhotsk; eastern Kamchatka; western Bering Sea; Aleutian Islands; eastern Pacific to Point Conception, California (Gilbert, 1895; Isakson et al., 1971; Jordan and Gilbert, 1899; Quast, 1960; Shmidt, 1950; Ueno, 1970; Wilimovsky, 1954).

Hexagrammos octogrammus (Pallas). Masked greenling.

Northern Sea of Japan; Tatar Strait; Sakhalin; Sea of Okhotsk; Avatcha Bay; Aleutian Islands; Bering Sea-Gulf of Alaska; southeastern Alaska (Jordan and Gilbert, 1899; Quast, 1960, 1968; Shmidt, 1950; Ueno, 1970; Wilimovsky, 1954).

ABBL: southeastern Alaska.

Hexagrammos stelleri Tilesius. Whitespotted greenling.

Hokkaido; Peter the Great Bay; Avatcha Bay; Commander Islands; Aleutian Islands; Bering Sea-California (Gilbert, 1895; Jordan and Gilbert, 1899; Popov, 1933; Quast, 1960; Shmidt, 1950; Taylor, 1967a; Ueno, 1970; Wilimovsky, 1954).

ABBL: Bristol Bay; Kodiak Island, Cook Inlet; southeastern Alaska.

Hexagrammos supereilirosus (Pallas). (See *H. lagocephalus* (Pallas)).

Ophiodon elongatus Girard. Lingcod.

Bering Sea (doubtful; record unverified); Kodiak Island-Baja California (Grinols, 1965; Quast, 1960; Taylor, 1967a; Wilimovsky, 1954).

ABBL: southeastern Alaska.

Pleurogrammus monopterygius (Pallas). Atka mackerel.

Yellow Sea; Sea of Japan; Aniva Bay; Cape Olytorsky; Commander Islands; Bering Sea-California (Andriyashev, 1937; Isakson et al., 1971; Jordan and Gilbert, 1899; Quast, 1960; Shmidt, 1950; Ueno, 1970; Wilimovsky, 1954).

ABBL: Bering Sea; Shumagin Islands; Kodiak Island; Gulf of Alaska; southeastern Alaska.

ANOPLOPOMATIDAE — sablefishes

Anoplopoma fimbria (Pallas). Sablefish, black cod, coalfish (Russ.).

Japan; Cape Olytorsky; Bering Sea-California (Andriyashev, 1937; Clemens and Wilby, 1961; Grinols, 1965; Isakson et al., 1971; Taylor, 1967a; Ueno, 1970; Wilimovsky, 1954).

ABBL: Gulf of Alaska; southeastern Alaska.

Erilepis zonifer (Lockington). Skilfish.

Japan; Kamchatka; southeastern Alaska; California (Grinols, 1965; Okada, 1955; Phillips, 1966; Ueno, 1970; Wilimovsky, 1954).

ABBL: Gulf of Alaska.

COTTIDAE — sculpins

Archaulus biseriatus Gilbert and Burke. Scaled sculpin.

Petrel Bank (Bering Sea) (Gilbert and Burke, 1912).

**Archistes plumarius* Jordan and Gilbert.
Kuril Islands (Jordan and Gilbert, 1899; Schmidt, 1950; Ueno, 1970).

**Artediellus camchaticus* Gilbert and Burke.
Sea of Okhotsk; Petropavlovsk (Schmidt, 1927; Schmidt, 1950).

**Artediellus gomojunovi* Taranetz.
Eastern Kamchatka; northern Anadyr Gulf; western Bering Sea (Andriyashev, 1937, 1954; Ueno, 1970).

Artediellus miacanthus Gilbert and Burke.
Northern Sea of Japan; Sea of Okhotsk; Petropavlovsk; Anadyr Gulf; Bering Sea (Andriyashev, 1937; Schmidt, 1927; Shmidt, 1950; Ueno, 1970; Wilimovsky, 1954).

Artediellus pacificus Gilbert. Hookhorned sculpin (Russ.).
Northern Sea of Japan; Sea of Okhotsk; Anadyr Gulf; Bering Sea-Gulf of Alaska (Andriyashev, 1937; Gilbert, 1895; Jordan et al., 1930; Jordan and Gilbert, 1899; Popov, 1933; Quast, 1968; Schmidt, 1927; Shmidt, 1950; Ueno, 1970; Wilimovsky, 1954).

ABBL: Krenitzin and Unimak Islands (Aleutian Islands); Cook Inlet; southeastern Alaska.

Artediellus seaber Knipowitsch. Hamecon.
Western Bering-Chukchi Sea; Arctic Ocean; northern Bering Sea (Andriyashev, 1937, 1954; Walters, 1955; Wilimovsky, 1954).
ABBL: Chukchi Sea; Point Barrow.

Artediellus uncinatus (Reinhardt). Arctic hookear sculpin.
Circumpolar (Leim and Scott, 1966; Schmidt, 1927; Walters, 1955; Wilimovsky, 1954).

Artediellus fenestratus (Jordan and Gilbert). Pad-de-d sculpin.

Aleutian Islands; Gulf of Alaska-California (Gilbert and Thompson, 1905; Wilimovsky, 1954, 1964).

ABBL: Kachemak Bay (Cook Inlet); southeastern Alaska.

Artediellus harringtoni (Starks). Scalyhead sculpin.

Gulf of Alaska-southern California (Clemens and Wilby, 1961; Hubbard and Reeder,

1965; Quast, 1968).

ABBL: southeastern Alaska.

Artedius lateralis (Girard). Smoothhead sculpin.

Gulf of Alaska-southern California (Clemens and Wilby, 1961; Hubbard and Reeder, 1965; Hubbs and Schultz, 1941; Quast, 1968).

ABBL: southeastern Alaska.

**Artedius meanyi* (Jordan and Starks). Puget Sound sculpin.

British Columbia (Rosenblatt and Wilkie, 1963).

Ascelichthys rhodorus Jordan and Gilbert.
Rosy lip sculpin.

Southeastern Alaska-California (Wilimovsky, 1954).

Blepsias bilobus Cuvier. Crested sculpin.

Northern Sea of Japan; southern Sea of Okhotsk; Kamchatka; Petropavlovsk; Bering Sea-British Columbia (Jordan and Gilbert, 1899; Popov, 1933; Shmidt, 1950; Wilimovsky, 1954, 1964).

ABBL: Bering Sea; Shelikof Strait; southeastern Alaska.

Blepsias cirrhosus (Pallas). Silverspotted sculpin.

Northern Sea of Japan; southern Sea of Okhotsk; Petropavlovsk; Aleutian Islands; Bering Sea-California (Isakson et al., 1971; Jordan and Gilbert, 1899; Popov, 1933; Shmidt, 1950; Ueno, 1970; Wilimovsky, 1954, 1964).

ABBL: Cook Inlet; southeastern Alaska.

Clinocottus acuticeps (Gilbert). Sharpnose sculpin.

Aleutian Islands; Bering Sea-California (Isakson et al., 1971; Wilimovsky, 1954, 1964).

ABBL: southeastern Alaska.

Clinocottus embryum (Jordan and Starks). Calico sculpin.

Aleutian Islands; Bering Sea-California (Isakson et al., 1971; Wilimovsky, 1954, 1964).

Clinocottus globiceps (Girard). Mosshead sculpin.

Gulf of Alaska-California (Wilimovsky, 1954).

Cottus aleuticus Gilbert. Coastrange sculpin.

Aleutian Islands; Bering Sea-California (Carl et al., 1959; Jordan and Gilbert, 1899;

McAllister and Lindsey, 1961; McPhail and Lindsey, 1970; Wilimovsky, 1954, 1964).
ABBL: Alaska Peninsula; Kodiak Island; Kenai Peninsula; Prince William Sound; southeastern Alaska.

Cottus asper Richardson. Prickly sculpin.
Southeastern Alaska-California (Carl et al., 1959; McAllister and Lindsey, 1961; McPhail and Lindsey, 1970; Wilimovsky, 1954).
ABBL: southeastern Alaska.

Cottus cognatus Richardson. Slimy sculpin.
Bering Sea and Arctic Ocean drainages of eastern Siberia, Alaska, and Canada to New Brunswick; south to central North America; Cook Inlet to Stikine River in southeastern Alaska (Carl et al., 1959; McAllister and Lindsey, 1961; McPhail and Lindsey, 1970; Walters, 1955; Wilimovsky, 1954).

ABBL: Yukon and Copper Rivers.

**Cottus gulosus* (Girard). Riffle sculpin.
Southeastern Alaska-California (Alaskan record doubtful) (Wilimovsky, 1954).

Cottus protrusus Schultz and Spoor.
Bering Sea-central Alaska (Wilimovsky, 1954).

Crossius albomaculatus Schmidt.
St. Paul Island (Hubbs and Schultz, 1941).

Dasyccottus setiger Bean. Spinyhead sculpin.
Sea of Japan; central Sea of Okhotsk; Petropavlovsk; Aleutian Islands; Bering Sea-Washington (Andriyashev, 1937; Gilbert, 1895; Jordan and Gilbert, 1899; Shmidt, 1950; Ueno, 1970; Wilimovsky, 1954).

ABBL: Bering Sea; Unalaska Island; Unimak Pass; Alaska Peninsula; Shumagin Islands; Kodiak Island; Gulf of Alaska; southeastern Alaska.

Enophrys bison (Girard). Buffalo sculpin.
Gulf of Alaska-California (Wilimovsky, 1954).
ABBL: southeastern Alaska.

Enophrys diceraus (Pallas).⁹ Antlered sculpin.
Sea of Japan; Sea of Okhotsk; Petropavlovsk; Cape Olytorsky; Bering Sea-Southeastern

Alaska (Andriyashev, 1937, 1954; Evermann and Goldsborough, 1907; Popov, 1933; Sandercock and Wilimovsky, 1968; Shmidt, 1950; Ueno, 1970; Wilimovsky, 1954).

ABBL: Chukchi Sea; southern shore of Alaska Peninsula; Cook Inlet; southeastern Alaska.

Eurymenes gyrinus Gilbert and Burke.
Peter the Great Bay; Tatar Strait; Hokkaido; Sea of Okhotsk; Amchitka Island (Aleutian Islands); Bering Sea (Shmidt, 1950; Watanabe, 1960; Ueno, 1970; Wilimovsky, 1954, 1964).

ABBL: Cape Newenham (eastern Bering Sea); Kodiak Island.

Gilbertidia sigalutes (Jordan and Starks). Soft sculpin.

Adak Island (Aleutian Islands); southeastern Alaska; Washington (Gilbert and Thompson, 1905; Grinols, 1965; Welander and Alverson, 1954; Wilimovsky, 1954, 1964).
ABBL: southeastern Alaska.

Gymnacanthus detrisus Gilbert and Burke.
Sea of Japan-eastern side of Kamchtaka (Andriyashev, 1937; Gilbert and Burke, 1912; Popov, 1933; Shmidt, 1950; Ueno, 1970).
ABBL: Bristol Bay.

Gymnacanthus galcatus Bean. Armorhead sculpin, helmeted sculpin (Russ.).
Hokkaido-Bering Sea-southeastern Alaska; Aleutian Islands; Hudson Bay (Andriyashev, 1937, 1954; Evermann and Goldsborough, 1907; Hubbard and Reeder, 1965; Isakson et al., 1971; Jordan and Gilbert, 1899; Scofield, 1899; Shmidt, 1950; Vladkov, 1933; Watanabe, 1960; Ueno, 1970; Wilimovsky, 1954, 1964).

ABBL: Bering Sea; Shumagin Islands; Cook Inlet; Gulf of Alaska; southeastern Alaska.

Gymnacanthus pistilliger (Pallas). Threaded sculpin (Russ.).

Sea of Japan-Arctic Ocean; Bering Sea; Aleutian Islands (Andriyashev, 1937, 1954; Jordan and Gilbert, 1899; Jordan and Starks, 1904; Popov, 1933; Scofield, 1899; Shmidt, 1950; Walters, 1955; Watanabe, 1960; Ueno, 1970; Wilimovsky, 1954, 1964).

⁹ Sandercock and Wilimovsky (1968) revise *Enophrys*, and although according to their key all adult specimens in the ABBL collection are *E. lucasi*, the juveniles key to *E. diceraus*, *E. lucasi*, or both. Our data on 24 Alaska specimens indicate that the key characters the authors used were size-specific, and plots of the indices against specimen length suggest one species. Until the

relation of size specificity to the species indices is resolved, we prefer to classify ABBL specimens collected to date as *E. diceraus*.

ABBL: Bering Sea; Unimak Island (Aleutian Islands); Cook Inlet; Kodiak Island; southeastern Alaska.

Gymnoanthus tricuspidis (Reinhardt). Arctic staghorn sculpin.

Circumpolar; Bering Sea; Hudson Bay (Andriyashov, 1937, 1954; Leim and Scott, 1966; Vladykov, 1933; Walters, 1955; Wilimovsky, 1954).

ABBL: Chukchi Sea; Point Barrow.

Hemilepidotus giberti Jordan and Starks.

Northern Sea of Japan; Aniva Bay; Kamchatka; Kuril Strait; Commander Islands; Bering Sea (Peden, 1964; Shmidt, 1950; Ueno, 1970).

Hemilepidotus hemilepidotus (Tilesius). Red Irish lord.

Sea of Okhotsk; Aleutian Islands; Bering Sea-California (Isakson et al., 1971; Jordan and Gilbert, 1899; Peden, 1964; Popov, 1933; Shmidt, 1950; Taylor, 1967a; Ueno, 1970; Wilimovsky, 1954, 1964).

ABBL: Bristol Bay; Gulf of Alaska; southeastern Alaska.

Hemilepidotus jordani Bean. Yellow Irish lord. North Pacific Ocean to Anadyr Gulf; Aleutian Islands; Bering Sea-southeastern Alaska (Andriyashov, 1937; Isakson et al., 1971; Jordan and Gilbert, 1899; Peden, 1964; Ueno, 1970; Wilimovsky, 1954, 1964).

ABBL: Unalaska Island (Aleutian Islands); Alaska Peninsula; Shumagin Islands; Kodiak Island; Kenai Peninsula; Gulf of Alaska; Lituya Bay; southeastern Alaska.

Hemilepidotus papilio (Bean). Butterfly sculpin.

Sea of Okhotsk; eastern Kamchatka; Anadyr Gulf; Bering Sea (Andriyashov, 1937, 1954; Jordan and Gilbert, 1899; Peden, 1964; Shmidt, 1950; Ueno, 1970; Wilimovsky, 1954).

Hemilepidotus spinosus (Ayres). Brown Irish lord.

Southeastern Alaska-California (Peden, 1964). ABBL: southeastern Alaska.

Hemilepidotus zapus (Gilbert and Burke).

Bering Sea; Aleutian Islands (Peden, 1964; Wilimovsky, 1954, 1964).

ABBL: Chukchi Sea.

Hemitripterus villosus (Pallas).

Sea of Japan; Hokkaido; Aniva Bay; Sakhalin; Petropavlovsk; Karaganski Bay; southern Bering Sea; Kodiak Island (Andriyashov, 1937; Gilbert, 1895; Isakson et al., 1971; Jordan and Gilbert, 1899; Jordan and Starks, 1904; Leim and Scott, 1966; Popov, 1933; Shmidt, 1950; Watanabe, 1960; Ueno, 1970; Wilimovsky, 1954).

Icelinus borealis Gilbert. Northern sculpin.

Aleutian Islands; Bering Sea-Washington (Gilbert, 1895; Gilbert and Thompson, 1905; Grinols, 1965; Jordan and Gilbert, 1899; Wilimovsky, 1954, 1964).

ABBL: Unimak and Krenitzin Islands (Aleutian Islands); Shumagin Islands; Trinity Islands; Cook Inlet; Kodiak Island; Gulf of Alaska; southeastern Alaska.

Icelinus burchami Evermann and Goldsborough. Dusky sculpin.

Southeastern Alaska-California (Barracough and Butler, 1965; Grinols, 1965; Wilimovsky, 1954).

**Icelinus filamentosus* Gilbert. Threadfin sculpin.

British Columbia-southern California (Clemens and Wilby, 1961; Gilbert and Thompson, 1905; Grinols, 1965).

**Icelinus tenuis* Gilbert. Spotfin sculpin.

British Columbia-southern California (Grinols, 1965; Taylor 1967a).

Icelus bieornis (Reinhardt). Twohorn sculpin.

Bristol Bay; circumpolar; east of Point Barrow (Gilbert, 1895; Vladykov, 1933; Walters, 1955).

Icelus canaliculatus Gilbert.

Sea of Okhotsk; Unalaska Island (Aleutian Islands); eastern Bering Sea (Gilbert, 1895; Isakson et al., 1971; Jordan and Gilbert, 1899; Shmidt, 1950; Wilimovsky, 1954).

Icelus euryops Bean.

Gulf of Alaska (Jordan and Gilbert, 1899; Wilimovsky, 1954).

Icelus scutiger Bean.

Bering Sea-Gulf of Alaska; Attu Island (Aleutian Islands); Alaska Peninsula (Gilbert, 1895; Jordan and Gilbert, 1899; Wilimovsky, 1954, 1964).

ABBL: Bering Sea.

Icelus spatula Gilbert and Burke. Spatulate sculpin.

Kara Sea eastward to western Greenland and south to Labrador and Cape Cod; Siberian Sea; Okhotsk Sea; Bering Sea; circum-polar (Andriyashev, 1937, 1954; Leim and Scott, 1966; Shmidt, 1950; Walters, 1955; Wilimovsky, 1954).

ABBL: Unimak Island (Aleutian Islands); Kuskokwim Bay; Shumagin Islands; Glacier Bay (southeastern Alaska).

Icelus spiniger Gilbert.

Sea of Japan; Kamchatka; Aleutian Islands; Bering Sea-southeastern Alaska (Andriyashev, 1937; Gilbert, 1895; Jordan and Gilbert, 1899; Jordan and Starks, 1904; Okada, 1955; Shmidt, 1950; Ueno, 1970; Watanabe, 1960; Wilimovsky, 1954, 1964).

ABBL: Bering Sea; Unimak and Krenitzin Islands (Aleutian Islands); Gulf of Alaska; Cook Inlet; Glacier Bay (southeastern Alaska).

Icelus uncinalis Gilbert and Burke.

Bering Sea; Aleutian Islands (Andriyashev, 1937; Shmidt, 1950; Ueno, 1970; Wilimovsky, 1954, 1964).

ABBL: Unimak Island (Aleutian Islands); Shumagin Islands; Kodiak Island; Cook Inlet; Gulf of Alaska.

Icelus vicinalis Gilbert.

Bering Sea; Bristol Bay (Gilbert, 1895; Jordan and Gilbert, 1899; Wilimovsky, 1954).

Leptocottus armatus Girard. Pacific staghorn sculpin.

Gulf of Alaska-Baja California (Carl et al., 1959; Roedel, 1953; Wilimovsky, 1954).

ABBL: Alaska Peninsula; Prince William Sound; southeastern Alaska.

Malacocottus kincaidi Gilbert and Thompson. Blackfin sculpin.

Hokkaido; Sea of Okhotsk; southern Bering Sea; Aleutian Islands; Gulf of Alaska-Washington (Andriyashev, 1937; Clemens and Wilby, 1961; Gilbert, 1895; Gilbert and Thompson, 1905; Grinols, 1965; Isakson et al., 1971; Jordan and Gilbert, 1899; Taylor, 1967a; Watanabe, 1960; Ueno, 1970; Wilimovsky, 1954).

ABBL: Bering Sea; Fox Islands (Aleutian Islands); Shumagin Islands; Afognak Is-

land; Cook Inlet; Gulf of Alaska; Yakutat; Cape Fairweather; southeastern Alaska.

Megalocottus laticeps (Gilbert).

Bristol Bay; Port Clarence (Seward Peninsula) (Jordan and Gilbert, 1899; Scofield, 1899).

Megalocottus platycephalus (Pallas). Belligerent sculpin.

Sea of Japan; Peter the Great Bay; Sea of Okhotsk; Petropavlovsk; Bering Sea; Chukchi Sea; Arctic Alaska (Andriyashev, 1954; Jordan and Gilbert, 1899; Jordan and Starks, 1904; Popov, 1933; Shmidt, 1950; Ueno, 1970; Wilimovsky, 1954).

Microcottus sellaris (Gilbert). Brightbelly sculpin.

Sea of Japan; Sea of Okhotsk; Bering Sea (Andriyashev, 1954; Shmidt, 1950; Wilimovsky, 1954).

Myoxocephalus jaok (Cuvier). Plain sculpin; shorthorn sculpin (Russ.).

Japan; Robben Reef (Sakhalin); Sea of Okhotsk; Petropavlovsk; Bering Sea-Arctic Alaska; Aleutian Islands (Andriyashev, 1954; Gilbert, 1895; Jordan and Gilbert, 1899; Jordan and Starks, 1904; Popov, 1933; Scofield, 1899; Shmidt, 1950; Ueno, 1970; Walters, 1955; Watanabe, 1960; Wilimovsky, 1954, 1964).

ABBL: Chukchi Sea; Bristol Bay; Cold Bay (south side of Alaska Peninsula).

Myoxocephalus mednius Bean.

Attu and Agattu Islands (Aleutian Islands); Bering Sea (Jordan and Gilbert, 1899; Wilimovsky, 1954, 1964).

Myoxocephalus niger (Bean). Warthead sculpin.

Hokkaido; Sea of Okhotsk; Aleutian Chain; Bering Sea (Andriyashev, 1937; Jordan and Gilbert, 1899; Shmidt, 1950; Ueno, 1970; Watanabe, 1960; Wilimovsky, 1954, 1964).

Myoxocephalus platycephalus (Pallas).

Northern Sea of Japan; Sea of Okhotsk; Bering Sea; Chukchi Sea; Arctic Alaska (Walters, 1955).

Myoxocephalus polyacanthocephalus (Pallas). Great sculpin.

Eastern Sea of Japan; Tatar Strait; Aniva

Bay; northern Sea of Okhotsk; Petropavlovsk; Commander Islands; Pribilof Islands; Aleutian Islands; Bering Sea-Washington (Gilbert, 1895; Jordan and Gilbert, 1899; Jordan and Starks, 1904; Popov, 1933; Scofield, 1899; Shmidt, 1950; Ueno, 1970; Watanabe, 1960; Wilimovsky, 1954, 1964).

ABBL: Alaska Peninsula; Kachemak Bay; Kodiak Island; Gulf of Alaska; southeastern Alaska.

Myoxocephalus quadricornis (Linnaeus). Four-horn sculpin.

Anadyr Gulf; Bering Sea; Arctic Alaska; Polar Basin; North Atlantic Ocean (Leim and Scott, 1966; McAllister, 1960; McPhail and Lindsey, 1970; Walters, 1955; Wilimovsky, 1954).

ABBL: Beaufort Sea.

Myoxocephalus scorpioides (Fabricius). Arctic sculpin.

Northern Anadyr Gulf; Bering Sea; Chukchi Sea; Arctic Alaska east to Gulf of St. Lawrence; Greenland and eastern Siberian Sea (Andriyashev, 1937, 1954; Jordan and Gilbert, 1899; Leim and Scott, 1966; Scofield, 1899; Vladykov, 1933; Walters, 1955; Wilimovsky, 1954).

ABBL: Chukchi Sea.

Myoxocephalus scorpius (Linnaeus). Short-horn sculpin.

Northern Kuril Islands; Sea of Okhotsk; Bering Sea; Chukchi Sea; Aleutian Islands; Kara Sea to eastern Greenland; North Atlantic (Andriyashev, 1954; Leim and Scott, 1966; Shmidt, 1950; Vladykov, 1933; Walters, 1955; Wilimovsky, 1954, 1964).

ABBL: Point Barrow; Bristol Bay; Gulf of Alaska; southeastern Alaska.

Myoxocephalus stelleri Tilesius.

Japan; Vladivostok; Sakhalin; Sea of Okhotsk; Petropavlovsk; Bering Sea; Medni (Commander Islands) and Unalaska Island (Aleutian Islands) (Andriyashev, 1937, 1954; Jordan and Gilbert, 1899; Jordan and Starks, 1904; Popov, 1933; Shmidt, 1950; Ueno, 1970; Walters, 1955; Wilimovsky, 1954, 1964).

Myoxocephalus verrucosus (Bean). Warty sculpin (Russ.).

Kuril Islands; Sea of Okhotsk; Bering Sea; Chukchi Sea; Unalaska Island; Bristol Bay (Andriyashev, 1937, 1954; Gilbert, 1895; Jordan and Gilbert, 1899; Scofield, 1899; Shmidt, 1950; Ueno, 1970).

ABBL: Chukchi Sea.

Nautichthys oculofasciatus (Girard). Sailfin sculpin.

Eastern Kamchatka; St. Lawrence Island; southeastern Alaska-California (Andriyashev, 1937; Clemens and Wilby, 1961; Hubbard and Reeder, 1965; Ueno, 1970).

ABBL: southeastern Alaska.

Nautichthys pribilorius (Jordan and Gilbert). Eyeshade sculpin.

Sea of Japan-Chukchi Sea; Point Barrow-Kodiak Island; Pribilof Islands; Aleutian Islands (Andriyashev, 1954; Jordan and Gilbert, 1899; Jordan and Starks, 1904; Peden, 1970; Popov, 1933; Shmidt, 1950; Wilimovsky, 1954, 1964).

ABBL: Chukchi Sea; Bering Sea; Stephens Passage (southeastern Alaska).

Nautichthys robustus Peden.

Aleutian Islands; British Columbia (Peden, 1970).

Oligocottus maculosus Girard. Tidepool sculpin.

Sea of Okhotsk; Bering Sea-California (Ueno, 1970; Wilimovsky, 1954).

ABBL: southeastern Alaska.

**Oligocottus rimensis* (Greeley). Saddleback sculpin.

British Columbia-California (Bolin, 1944; Clemens and Wilby, 1961; Gilbert and Thompson, 1905).

Oligocottus snyderi Greeley. Fluffy sculpin. Southeastern Alaska-California (Clemens and Wilby, 1961; Quast, 1968).

ABBL: southeastern Alaska.

Onocottus hexacornis (Richardson).

Northern Bering Sea; Beaufort Sea; Seward Peninsula; Commander Islands; Greenland (Jordan and Gilbert, 1899; Scofield, 1899).

Oxycoleus acuticeps (Gilbert).

Unalaska Island (Aleutian Islands); Prince William Sound; Kodiak Island-Vancouver Island (Jordan and Gilbert, 1899).

- **Paricelinus hopliticus* Eigenmann and Eigenmann. Thornback sculpin.
Queen Charlotte Sound; California (Taylor, 1967a).
- Phalloeocttus obtusus* Schultz. Spineless sculpin.
Aleutian Islands; Bering Sea (Wilimovsky, 1954, 1964).
- Porocottus bradfordi* Rutter.
Bering Sea (Andriyashev, 1937; Wilimovsky, 1954, 1964).
- **Porocottus quadratus* Bean.
Commander Islands (Jordan and Gilbert, 1899).
- Porocottus quadrifilis* Gill.
Bering Strait; Bering Sea (Andriyashev, 1954; Jordan and Gilbert, 1899; Wilimovsky, 1954).
- Porocottus sellaris* (Gilbert).
Petropavlovsk; Bristol Bay (Jordan and Gilbert, 1899; Popov, 1933; Ueno, 1970).
- Radulinus asprellus* Gilbert. Slim sculpin.
Gulf of Alaska-Baja California (Grinols, 1965; Hubbs and Schultz, 1941; Isakson et al., 1971; Wilimovsky, 1954).
ABBL: Kodiak Island; Gulf of Alaska; southeastern Alaska.
- Rhamphocottus richardsoni* Günther. Grunt sculpin.
Bering Sea-California (Clemens and Wilby, 1961; Ueno, 1970; Wilimovsky, 1954).
ABBL: Gulf of Alaska; southeastern Alaska.
- Scorpaenichthys marmoratus* (Ayres).
Cabezon.
Southeastern Alaska-Baja California (Clemens and Wilby, 1961; Quast, 1968; Roedel, 1953).
ABBL: southeastern Alaska.
- Sigmistes caulus* Rutter.
Aleutian Islands; Bering Sea-Baja California (Wilimovsky, 1954, 1964).
- Sigmistes smithi* Schultz. Kelp sculpin.
Aleutian Islands; Bering Sea (Wilimovsky, 1954, 1964).
- Stelgidistrum beringianum* Gilbert and Burke.
Cape Olytorsky; Aleutian Islands; Bering Sea (Andriyashev, 1937; Wilimovsky, 1954, 1964).
- **Stelgidistrum coneinnum* Andriyashev.
Cape Olytorsky (Andriyashev, 1937).
- Sternias xenostethus* (Gilbert).
Aleutian Islands; Bering Sea (Jordan and Gilbert, 1899; Wilimovsky, 1954, 1964).
- Stlegicottus xenogrammus* Bolin.
Aleutian Islands (Bolin, 1939; Wilimovsky, 1954).
- Synchirus gilli* Bean. Manaced sculpin.
Southeastern Alaska-California (Wilimovsky, 1954).
- Theeopterus aleuticus* Smith.
Bering Sea (Wilimovsky, 1954).
- Thyrsicus anoplus* Gilbert and Burke.
Aleutian Islands; Bering Sea (Wilimovsky, 1954, 1964).
- Triglops forficata* (Gilbert). Scissortail sculpin.
Bering Sea; Kodiak Island (Dryfoos, 1961; Isakson et al., 1971; Jordan and Gilbert, 1899; Ueno, 1970; Wilimovsky, 1954).
ABBL: Aleutian Islands; Shumagin Islands; northern Gulf of Alaska.
- **Triglops jordani* (Shmidt).
Northern Sea of Japan; Sea of Okhotsk; Petropavlovsk; western Bering Sea (Shmidt, 1950; Ueno, 1970).
- Triglops macellus* (Bean). Roughspine sculpin.
Bering Sea-Washington (Wilimovsky, 1954).
ABBL: Aleutian Islands; Shumagin Islands; Kodiak Island; Gulf of Alaska; southeastern Alaska.
- Triglops metopias* Gilbert and Burke.
Bering Sea; Aleutian Islands; southeastern Alaska (Quast, 1968; Wilimovsky, 1954, 1964).
ABBL: Alaska Peninsula; southeastern Alaska.
- Triglops pingeli* Reinhardt. Ribbed sculpin, Bean's triglops (Russ.).
Sea of Japan; Tatar Strait; Sea of Okhotsk; Petropavlovsk; Bering Sea; Aleutian Islands-Washington; circumpolar (Andriyashev, 1954; Isakson et al., 1971; Jordan and Gilbert, 1899; Jordan and Starks, 1904; Popov, 1933; Shmidt, 1950; Ueno, 1970; Vladkov, 1933; Walters, 1955; Watanabe, 1960; Wilimovsky, 1954, 1964).
ABBL: Chukchi Sea; Bering Sea; Bristol

Bay; Unimak Island (Aleutian Islands); Shumagin Islands; Kodiak Island; Cook Inlet; Gulf of Alaska; southeastern Alaska.

Triglops scepticus Gilbert. Spectacled triglops. Hokkaido; Tatar Strait; northwestern Sea of Okhotsk; Cape Olytorsky; Bering Sea; Attu Island (Aleutian Islands) (Andriyashov, 1937; Isakson et al., 1971; Okada, 1955; Shmidt, 1950; Ueno, 1970; Watanabe, 1960; Wilimovsky, 1954, 1964).

ABBL: Aleutian Islands; Shumagin Islands; Gulf of Alaska.

Ulea bolini Myers. Bigmouth sculpin. Cape Navarin; Alaska Peninsula; Bering Sea-British Columbia (Andriyashov, 1937; Clemens and Wilby, 1961; Wilimovsky, 1954, 1964).

ABBL: Unalaska and Unimak Islands (Aleutian Islands); Bering Sea; Gulf of Alaska; southeastern Alaska.

Zesticelus profundorum (Gilbert).

Petropavlovsk; Aleutian Islands; Bering Sea-Baja California (Andriyashov, 1937; Grey, 1956; Grinols, 1965; Jordan and Gilbert, 1899; Wilimovsky, 1954).

PSYCHROLUTIDAE

Psychrolutes paradoxus Günther. Tadpole sculpin. Sea of Japan; Kuril Islands; northern sea of Okhotsk; Kamchatka; Cape Olytorsky; Aleutian Islands; Alaska Peninsula; Bering Sea-Washington (Andriyashov, 1937; Gilbert, 1895; Grinols, 1965; Jordan and Gilbert, 1899; Shmidt, 1950; Taylor, 1967a; Ueno, 1970; Wilimovsky, 1954, 1964).

ABBL: Alaska Peninsula; Gulf of Alaska; Cook Inlet; southeastern Alaska.

AGONIDAE — poachers and alligatorfishes

Agonopsis emmelane (Jordan and Starks). Northern spearnose poacher.

Southeastern Alaska-California (Wilimovsky, 1954).

ABBL: Northern Gulf of Alaska.

Anoplagonus inermis (Günther). Smooth alligatorfish.

Korea; Aleutian Islands; Gulf of Alaska-British Columbia (Jordan and Gilbert, 1899; Wilimovsky, 1954, 1964).

ABBL: Shumagin Islands; Alaska Peninsula; Gulf of Alaska; southeastern Alaska.

Aspidophoroides bartoni Gilbert. Aleutian alligatorfish, Barton's shieldnose (Russ.).

Northern Sea of Japan; Sea of Okhotsk; Petropavlovsk; Cape Navarin; Aleutian Islands; Bering Sea (Andriyashov, 1937; Isakson et al., 1971; Jordan and Gilbert, 1899; Shmidt, 1950; Ueno, 1970; Wilimovsky, 1954, 1964).

ABBL: Chukchi Sea; Unimak Island; Shumagin Islands; Kodiak Island.

Aspidophoroides guntheri Bean.

Bering Sea (Jordan and Gilbert, 1899).

Aspidophoroides olriki Lütken. Arctic alligatorfish.

Anadyr Gulf; Bering Sea; Bering Strait; Chukchi Sea; Arctic Alaska; Hudson Bay; North Atlantic south to Newfoundland (Andriyashov, 1937; Leim and Scott, 1966; Vladykov, 1933; Walters, 1955; Wilimovsky, 1954).

ABBL: Chukchi Sea; Point Barrow.

Asterrotheca alascana (Gilbert). Gray starsnout.

Unimak Island (Aleutian Islands); Bering Sea-Washington (Grinols, 1965; Jordan and Gilbert, 1899; Wilimovsky, 1954, 1964).

ABBL: Bering Sea; Aleutian Islands; Shumagin Islands; Kodiak Island; Cook Inlet; southeastern Alaska.

Asterrotheca infraspinata (Gilbert). Spinycheek starsnout.

Bering Sea-Washington; California (Fitch, 1966b; Taylor, 1967a; Wilimovsky, 1954).

ABBL: Aleutian Islands; Bristol Bay; Kodiak Island; Gulf of Alaska; southeastern Alaska.

Asterrotheca pentacanthus (Gilbert). Bigeye poacher.

Bering Sea-California (Grinols, 1965; Wilimovsky, 1954).

Bathyagonus nigripinnis Gilbert. Blackfin poacher.

Bering Island (Commander Islands); Bering Sea-Oregon (Andriyashov, 1937; Grinols,

1965; Jordan and Gilbert, 1899; Wilimovsky, 1954).

ABBL: Aleutian Islands; Kodiak Island; southeastern Alaska.

Bothragonus swani (Steindachner). Rockhead. Kodiak Island; British Columbia-California (Clemens and Wilby, 1961; Hubbard and Reeder, 1965; Quast, 1968).

ABBL: southeastern Alaska.

Hypsagonus quadricornis (Cuvier). Fourhorn poacher.

Northern Sea of Japan; Aniva Bay; Sea of Okhotsk; Petropavlovsk; Bering Strait; Aleutian Islands; Bering Sea-Washington (Andriyashev, 1937, 1954; Isakson et al., 1971; Jordan and Gilbert, 1899; Popov, 1933; Shmidt, 1950; Ueno, 1970; Wilimovsky, 1954, 1964).

ABBL: Aleutian Islands; southeastern Alaska.

**Leptagonus decagonus* (Bloch and Schneider). Sea of Japan; Sea of Okhotsk; Anadyr Gulf; Greenland to Kara Sea; Alaska Arctic (?) (Andriyashev, 1937, 1954; Shmidt, 1950).

Oceella dodecaedron (Tilesius). Bering poacher, eight-edged foxling (Russ.).

Northern Sea of Japan; Sea of Okhotsk; Petropavlovsk; Bering Sea; Alaska Peninsula; Bristol Bay; Norton Sound (Andriyashev, 1954; Bailey and Gruchy, 1970; Jordan and Gilbert, 1899; Popov, 1933; Shmidt, 1950; Ueno, 1970; Wilimovsky, 1954, 1964).

ABBL: Kuskokwim Bay.

**Oceella impi* Gruchy.

British Columbia (Gruchy, 1970).

Occella verrucosa (Lockington). Warty poacher.

Southeastern Alaska-California (Bailey and Gruchy, 1970; Clemens and Wilby, 1961; Dryfoos, 1961).

ABBL: Bering side of Alaska Peninsula.

Odontopyxis trispinosa Lockington. Pygmy poacher.

Southeastern Alaska-California (Grinols, 1965; Hubbs, 1942; Wilimovsky, 1954).

ABBL: southeastern Alaska.

Pallasina barbata (Steindachner). Tubenose poacher.

Sea of Japan; Sea of Okhotsk; Petropavlovsk; Aleutian Islands; Bering Sea-Puget Sound (Andriyashev, 1937; Clemens and Wilby, 1961; Isakson et al., 1971; Jordan and Gilbert, 1899; Popov, 1933; Scofield, 1899; Shmidt, 1950; Ueno, 1970; Wilimovsky, 1954, 1964).

ABBL: Nunivak Island (Aleutian Islands); Kuskokwim Bay; Alaska Peninsula; Gulf of Alaska; southeastern Alaska.

**Percis japonicus* (Pallas).

Sea of Okhotsk; western Bering Sea; Anadyr Gulf (Andriyashev, 1937; Jordan and Gilbert, 1899; Schultz, 1967; Shmidt, 1950; Ueno, 1970).

Podothecus acipenserinus (Tilesius). Sturgeon poacher, sturgeon foxling (Russ.).

Anadyr Gulf; Point Barrow; Aleutian Islands; Bering Sea-Washington (Andriyashev, 1937; Clemens and Wilby, 1961; Isakson et al., 1971; Jordan and Gilbert, 1899; Ueno, 1970; Walters, 1955; Wilimovsky, 1954, 1964).

ABBL: Chukchi Sea; Aleutian Islands; Shumagin Islands; Bristol Bay; Gulf of Alaska; Cook Inlet; southeastern Alaska.

Sarritor frenatus (Gilbert). Sawback poacher, thintailed foxling (Russ.).

Japan; Kamchatka; Anadyr Gulf; Bering Sea; Bristol Bay; Aleutian Islands (Andriyashev, 1937, 1954; Jordan and Gilbert, 1899; Shmidt, 1950; Wilimovsky, 1954, 1964).

ABBL: Bering Sea; Krenitzin and Unimak Islands (Aleutian Islands); Shumagin Islands; Alaska Peninsula; Kodiak Island; Cook Inlet; Gulf of Alaska; southeastern Alaska.

Sarritor leptorhynchus (Gilbert). Longnose poacher.

Japan; Kamchatka; Commander Islands; Bering Sea; Gulf of Alaska (Andriyashev, 1937; Jordan and Gilbert, 1899; Shmidt, 1950; Wilimovsky, 1954).

ABBL: Aleutian Islands; Shumagin Islands.

**Xeneretmus latifrons* (Gilbert). Blacktip poacher.

British Columbia-California (Grinols, 1965).

CYCLOPTERIDAE — lumpfishes and snailfishes

**Acantholiparis opercularis* Gilbert and Burke. Bering Sea; North Pacific Ocean; Oregon (Burke, 1930; Grinols, 1965, 1966b).

Aptocyclus ventricosus (Pallas). Smooth lump-sucker.

Korea; Tatar Strait; Kamchatka; Anadyr Gulf; Commander Islands; Aleutian Islands; Bering Sea-British Columbia (Andriyashov, 1937; Grinols, 1965; Hubbs and Schultz, 1934b; Isakson et al., 1971; Lindberg and Legeza, 1955; Shmidt, 1950; Ueno, 1970; Wilimovsky, 1954, 1964).

ABBL: Aleutian Islands; Kenai Peninsula.

Careproctus abbreviatus Burke.

Sea of Okhotsk; south side of Alaska Peninsula; southeastern Alaska (Burke, 1930; Shmidt, 1950; Wilimovsky, 1954).

**Careproctus acanthodes* Gilbert and Burke.

Tatar Strait; Sea of Okhotsk (Burke, 1930; Shmidt, 1950; Ueno, 1970).

**Careproctus amblystomopsis* Andriyashov.

Kurilo-Kamchatkan Trench (Andriyashov, 1955b; Ueno, 1970).

Careproctus attenuatus Gilbert and Burke.

Bering Sea (Burke, 1930; Ueno, 1970; Wilimovsky, 1954).

Careproctus bowersianus Gilbert and Burke.

Bowers Bank; Bering Sea (Burke, 1930; Wilimovsky, 1954).

Careproctus cameliae Nalbant.

South-central Bering Sea (Schultz, 1967).

Careproctus colletti Gilbert.

Sea of Japan; Sea of Okhotsk; Bering Sea; North Pacific Ocean; southern side of Alaska Peninsula (Burke, 1930; Jordan and Gilbert, 1899; Shmidt, 1950; Ueno, 1970; Wilimovsky, 1954).

**Careproctus cypseluroides* Shmidt.

Sea of Okhotsk (Shmidt, 1950).

Careproctus eypselurus (Jordan and Gilbert).

Sea of Okhotsk; Bering Sea-Oregon (Burke, 1930; Grinols, 1965; Jordan and Gilbert, 1899; Shmidt, 1950; Ueno, 1970; Wilimovsky, 1954).

ABBL: Gulf of Alaska.

Careproctus cetenes Gilbert.

Unalaska Island (Aleutian Islands) (Burke, 1930; Jordan and Gilbert, 1899; Wilimovsky, 1954).

Careproctus fureellus Gilbert and Burke.

Sea of Okhotsk; Bering Sea (Burke, 1930; Shmidt, 1950; Wilimovsky, 1954).

Careproctus gilberti Burke. Smalldisk snailfish.

Southeastern Alaska; British Columbia; Oregon (Burke, 1930; Grinols, 1965; Isakson et al., 1971; Wilimovsky, 1954).

ABBL: Shelikof Strait; Afognak Island; Kenai Peninsula; southeastern Alaska.

**Careproctus mederi* Shmidt.

Sea of Okhotsk (Burke, 1930; Shmidt, 1950).

**Careproctus melanuroides* Shmidt.

Sea of Okhotsk (Shmidt, 1950).

Careproctus melanurus Gilbert. Blacktail snailfish.

British Columbia; Oregon-southern California (Burke, 1930; Fitch, 1966a; Forrester and Wilson, 1963; Grinols, 1965).

ABBL: Unalaska Island (Aleutian Islands); Gulf of Alaska.

Careproctus mollis Gilbert and Burke.

Bering Sea (Burke, 1930; Wilimovsky, 1954).

**Careproctus nigriens* Shmidt.

Sea of Okhotsk (Shmidt, 1950).

Careproctus opisthotremus Gilbert and Burke.

Bering Sea; Aleutian Islands (Burke, 1930; Wilimovsky, 1954).

Careproctus ostentum Gilbert.

Sakhalin; Unalaska Island (Aleutian Islands); Bering Sea (Burke, 1930; Jordan and Gilbert, 1899; Shmidt, 1950; Wilimovsky, 1954).

ABBL: Unalaska Island (Aleutian Islands) Shelikof Strait.

**Careproctus origerum* (Gilbert). Abyssal snailfish.

British Columbia (Burke, 1930; Grinols, 1965).

Careproctus phasma Gilbert.

Sea of Okhotsk; Bering Sea; Bristol Bay (Burke, 1930; Isakson et al., 1971; Jordan and Gilbert, 1899; Shmidt, 1950; Wilimovsky, 1954).

**Careproctus pyenosoma* Gilbert and Burke.
Shimushiru Island (Kuri Islands) (Burke, 1930; Shmidt, 1950; Ueno, 1970).

**Careproctus rastrinoides* Shmidt.
Sea of Okhotsk (Shmidt, 1950; Ueno, 1970).
Careproctus rastrinus Gilbert and Burke.
Sakhalin (Burke, 1930; Shmidt, 1950; Ueno, 1970).
ABBL: Bering Sea; southeastern Alaska.

**Careproctus roseofuscus* Gilbert and Burke.
Sakhalin (Burke, 1930; Shmidt, 1950; Ueno, 1970).

Careproctus scottae Chapman and DeLacy.
Southeastern Alaska (Wilimovsky, 1954).

**Careproctus segalicensis* Gilbert and Burke.
Sakhalin Island (Shmidt, 1950; Ueno, 1970).

**Careproctus scraphinnae* Shmidt.
Sea of Okhotsk (Shmidt, 1950).

Careproctus simus Gilbert.
Unalaska Island (Aleutian Islands) (Burke, 1930; Jordan and Gilbert, 1899; Wilimovsky, 1954).

Careproctus spectrum Bean.
Gulf of Alaska; southeastern Alaska (Burke, 1930; Jordan and Gilbert, 1899; Wilimovsky, 1954).
ABBL: Shelikof Strait.

**Careproctus trachysoma* Gilbert and Burke.
Sea of Japan; Sea of Okhotsk (Shmidt, 1950; Ueno, 1970).

Crystallichthys cyclospilus Gilbert and Burke.
Polka-dot snailfish (see footnote for *Liparis cyclostigma*).
Sea of Okhotsk; Bering Sea (Burke, 1930; Isakson et al., 1971; Shmidt, 1950; Wilimovsky, 1954, 1964).
ABBL: Krenitzin Islands and Unimak Pass (Aleutian Islands); Bering Sea.

**Crystallichthys mirabilis* Jordan and Gilbert.
Kamchatka (Burke, 1930; Jordan and Gilbert, 1899).

**Cyclopsis tentacularis* (Pallas).
Sea of Okhotsk (Shmidt, 1950).

Cycloptericthys glaber Steindachner. Globe-fish.
Sea of Okhotsk; Aleutian Islands; Bering Sea-British Columbia (Grinols, 1965; Hubbs

and Schultz, 1934a; Lindberg and Legeza, 1955; Wilimovsky, 1954, 1958, 1964).
ABBL: southeastern Alaska.

**Cyclopteroptosis bergi* Popov.
Sea of Okhotsk (Shmidt, 1950; Ueno, 1970).

**Cyclopteroptosis brashnikovi* (Shmidt).
Sea of Okhotsk (Shmidt, 1950).

Cyclopteroptosis phrynooides (Gilbert and Burke).
Kamchatka; Bering Sea; Aleutian Islands (Lindberg and Legeza, 1955; Ueno, 1970; Wilimovsky, 1954, 1958, 1964).
ABBL: Trinity Islands; Cook Inlet; Montague Strait; Gulf of Alaska.

**Cyclopteroptosis popovi* Soldatov.
Sea of Okhotsk (Shmidt, 1950).

**Elassodiscus tremebundus* Gilbert and Burke.
Sakhalin; Petropavlovsk (Burke, 1930; Shmidt, 1950).

Eumicrotremus andriashewi Perminov. Pimpled lump sucker.
Kuril Islands; northern Bering Sea; Chukchi Sea (Lindberg and Legeza, 1955; Ueno, 1970).

Eumicrotremus barbatus (Lindberg and Legeza).
Kurile Islands; Aleutian Islands (Lindberg and Legeza, 1955; Ueno, 1970; Wilimovsky, 1964).

Eumicrotremus birulai Popov.
Sea of Japan; Tatar Strait; Sea of Okhotsk; Petropavlovsk; western Bering Sea; Gulf of Alaska (Andriyashev, 1937; Lindberg and Legeza, 1955; Shmidt, 1950; Ueno, 1970).

Eumicrotremus derjagini Popov. Leatherfin lump sucker.
Sea of Japan; Sea of Okhotsk; Chukchi Sea; Arctic Ocean; Hudson Bay; Greenland; North Atlantic; Barents Sea; Kara Sea (Andriyashev, 1954; Leim and Scott, 1966; Shmidt, 1950; Ueno, 1970; Vladkyov, 1933; Walters, 1955; Wilimovsky, 1954).

Eumicrotremus gyrinops Garman.
Bering Sea; Aleutian Islands (Lindberg and Legeza, 1955; Ueno, 1970; Wilimovsky, 1964).

Eumicrotremus orbis (Günther). Pacific spiny lump sucker.
Tatar Strait; Sakhalin Island; northern Kuril

Islands; Sea of Okhotsk; Chukchi Sea; Commander and Aleutian Islands; Bering Sea-Washington (Andriyashev, 1937, 1954; Clemens and Wilby, 1961; Isakson et al., 1971; Lindberg and Legeza, 1955; Popov, 1933; Shmidt, 1950; Ueno, 1970; Wilimovsky, 1954, 1964).

ABBL: Bering Sea; Aleutian Islands; Kodiak Island; Cook Inlet; Gulf of Alaska; southeastern Alaska.

**Eumicrotremus soldatovi* Popov.

Sea of Okhotsk (Shmidt, 1950; Ueno, 1970).

**Eumicrotremus spinosus* (Müller).

Canadian Arctic; Greenland; Spitzbergen; Iceland; Norway-Barents Sea (Ueno, 1970).

Gyrinichthys minytremus Gilbert.

Unalaska Island (Aleutian Islands) (Burke, 1930; Jordan and Gilbert, 1899; Wilimovsky, 1954).

Lethotremus muticus Gilbert.

Bering Sea; Aleutian Islands (Isakson et al., 1971; Lindberg and Legeza, 1955; Ueno, 1970; Wilimovsky, 1954, 1964).

ABBL: Aleutian Islands.

Liparis agassizi (Putnam).

Japan; Sakhalin; Petropavlovsk; Unalaska Island (Aleutian Islands); Bristol Bay; Bering Sea (Burke, 1930; Jordan and Gilbert, 1899; Ueno, 1970).

Liparis bristolense (Burke).

Southeastern Bering Sea (Burke, 1930; Wilimovsky, 1954).

ABBL: Chukchi Sea.

Liparis callyodon (Pallas). Spotted snailfish.

Bering Sea; Aleutian Islands; southeastern Alaska-Washington (Burke, 1930; Jordan and Gilbert, 1899; Wilimovsky, 1954, 1964).

ABBL: Kenai Peninsula; southeastern Alaska.

**Liparis curilensis* Gilbert and Burke.

Sea of Okhotsk (Shmidt, 1950; Ueno, 1970).

Liparis cyclopus Günther. Ribbon snailfish.

Bering Sea; Aleutian Islands-Washington (Burke, 1930; Clemens and Wilby, 1961; Gordon and Backus, 1957; Grinols, 1965; Jordan and Gilbert, 1899; Wilimovsky, 1954, 1964).

ABBL: southeastern Alaska.

Liparis cyclostigma Gilbert.

Aleutian Islands; Bering Sea; Hudson Bay; Labrador coast¹⁰ (Burke, 1930; Gordon and Backus, 1957; Jordan and Gilbert, 1899; Leim and Scott, 1966; Vladivostok, 1933; Wilimovsky, 1954, 1964).

ABBL: Unalaska Island (Aleutian Islands); Shumagin Islands; Shelikof Strait; Kodiak Island; southeastern Alaska.

Liparis dennysi Jordan and Starks. Marbled snailfish.

Gulf of Alaska-Washington (Burke, 1930; Gilbert and Thompson, 1905; Grinols, 1965; Wilimovsky, 1954).

ABBL: Unimak Island (Aleutian Islands); Alaska Peninsula; Cook Inlet; southeastern Alaska.

**Liparis dulkeiti* Soldatov.

Sea of Okhotsk (Shmidt, 1950).

Liparis florae (Jordan and Starks). Tidepool snailfish.

Bering Sea-California (Hubbs and Schultz, 1934b; Jordan and Starks, 1895; Wilimovsky, 1954).

ABBL: southeastern Alaska.

Liparis fucensis Gilbert. Slipskin snailfish.

Southeastern Alaska-California (Burke, 1930; Grinols, 1965; Hubbs and Schultz, 1934b; Taylor, 1967a; Wilimovsky, 1954).

ABBL: southeastern Alaska.

Liparis gibbus Bean.

Chukchi Sea; eastern and western Bering Sea; Unalaska Island (Aleutian Islands);

¹⁰Leim and Scott (1966, p. 376 and 377) include Hudson Bay and the Labrador coast in the range of *Liparis cyclostigma* Gilbert. Their color description is taken from Gordon and Backus (1957, p. 19) who state that the coloration of their specimens fits that of the type description of Gilbert (1895). However, the color description as given by Gilbert was in error according to Gilbert and Burke (1912, p. 75) and applied to a different species, *Crystallichthys cyclospilus* Gilbert and Burke 1912. Apparently, the reference to Gilbert's description (Gilbert, 1895, p. 446 and 447) by Leim and Scott was inadvertent because the color of their specimens appears to correspond closer to the corrected description of *L. cyclostigma* that is given by Gilbert and Burke in their type description of *C. cyclospilus*. The counts and morphometry that Gordon and Backus give for their specimens seem to agree with the correct counts and morphometry cited in the original description and its correction. The common name "polka-dot snailfish" (Bailey et al., 1970) also is incorrectly applied and should be the common name of *C. cyclospilus*.

Bering Sea-southeastern Alaska (Andriyashov, 1954; Burke, 1930; Ueno, 1970; Wilimovsky, 1954, 1964).

**Liparis grebnitzkii* (Schmidt).

Bering Island (Commander Islands) (Burke, 1930).

Liparis hersehelinus Scofield. Bartail snailfish.
Arctic Alaska-Arctic Canada (Andriyashev, 1954; Burke, 1930; Jordan and Gilbert, 1899; Scofield, 1899; Wilimovsky, 1954).
ABBL: Point Barrow.

Liparis koefoedi Parr. Gelatinous seasnail.
Eastern Siberia Sea; Arctic circumpolar (Andriyashev, 1954; Leim and Scott, 1966; Walters, 1955; Wilimovsky, 1954).

**Liparis latifrons* Shmidt.
Sea of Okhotsk (Shmidt, 1950).

Liparis liparis (Linnaeus). Striped seasnail.
Arctic regions (Leim and Scott, 1966; Walters, 1955).

**Liparis marmoratus* Shmidt.
Sea of Okhotsk (Shmidt, 1950).

Liparis megacephalus (Burke).
Southeastern Bering Sea (Burke, 1930; Isachsen et al., 1971; Wilimovsky, 1954).

Liparis micraspidophorus (Gilbert and Burke).
Bering Island (Commander Islands); Bering Sea; Aleutian Islands (Burke, 1930; Wilimovsky, 1954, 1964).

Liparis muecosus Ayres. Slimy snailfish.
Kodiak Island-California (Burke, 1930; Hubbs and Schultz, 1934b; Jordan and Starks, 1895; Peden, 1966a).
ABBL: southeastern Alaska.

Liparis oehotensis Shmidt.
Sakhalin Island; Okhotsk Sea (Burke, 1930; Shmidt, 1950; Ueno, 1970).
ABBL: Kodiak Island.

Liparis pulchellus Ayres. Showy snailfish.
Peter the Great Bay; Tatar Strait; Bering Sea-California (Burke, 1930; Jordan and Gilbert, 1899; Shmidt, 1950; Wilimovsky, 1954, 1964).
ABBL: southeastern Alaska.

**Liparis punctatus* Shmidt.
Sea of Okhotsk (Shmidt, 1950).

**Liparis rhodosoma* Gilbert and Burke.
Sea of Okhotsk (Shmidt, 1950; Ueno, 1970).

Liparis rutteri (Gilbert and Snyder). Ringtail snailfish.

Bering Sea-California (Burke, 1930; Wilimovsky, 1954, 1964).

**Liparis sechantarensis* (Lindberg and Dulkeit).
Sea of Okhotsk (Shmidt, 1950).

Lipariseus nanus Gilbert. Pygmy snailfish.
Southeastern Alaska-California (Burke, 1930; Quast, 1968; Ueno, 1970).
ABBL: southeastern Alaska.

Neetoliparis pelagicus Gilbert and Burke. Tadpole snailfish.

Japan; Sea of Okhotsk; Bering Sea-California (Burke, 1930; Clemens and Wilby, 1961; Follett, 1952; Shmidt, 1950; Ueno, 1970; Wilimovsky, 1954).

ABBL: southeastern Alaska.

**Paraliparis albeolus* Shmidt.
Sea of Okhotsk (Shmidt, 1950).

Paraliparis caudatus Gilbert.
California (Gilbert, 1915; Gilbert and Burke, 1912).

ABBL: Stephens Passage (southeastern Alaska).

Paraliparis cephalus Gilbert. Blackbelly snailfish.

Bering Sea-California (Burke, 1930; Grinols, 1965; Jordan and Gilbert, 1899).

**Paraliparis daetyloides* Shmidt.
Sea of Okhotsk (Shmidt, 1950).

Paraliparis daetylosus Gilbert. Red snailfish.
Bering Sea; Aleutian Islands-California (Burke, 1930; Grinols, 1965; Wilimovsky, 1954).

Paraliparis deani Burke. Prickly snailfish.
Southeastern Alaska-California (Burke, 1930; Grinols, 1965; Wilimovsky, 1954).
ABBL: Kenai Peninsula; Montague Strait; southeastern Alaska.

**Paraliparis entoechloris* Gilbert and Burke.
Sea of Okhotsk (Burke, 1930; Shmidt, 1950; Ueno, 1970).

**Paraliparis grandis* Shmidt.
Sea of Okhotsk (Shmidt, 1950).

Paraliparis holomelas Gilbert.
Sea of Okhotsk; Bering Sea (Burke, 1930; Jordan and Gilbert, 1899; Shmidt, 1950; Wilimovsky, 1954).

**Paraliparis melanobranchus* Gilbert and Burke. Sea of Okhotsk (Burke, 1930; Shmidt, 1950; Ueno, 1970).

Paraliparis ulochir Gilbert. Broadfin snailfish. Bering Sea; Oregon-Gulf of California (Burke, 1930; Grey, 1956; Grinols, 1965; Jordan and Gilbert, 1899; Wilimovsky, 1954).

**Pelagocephalus vitiazii* Lindberg and Legeza. Kuril Islands; western Bering Sea (Lindberg and Legeza, 1955; Ueno, 1970).

Polypera beringiana (Gilbert and Burke). Bering snailfish. Bering Sea; Aleutian Islands-Washington (Burke, 1930; Wilimovsky, 1954).

Polypera greeni (Jordan and Starks). Lobefin snailfish. Bering Sea; Aleutian Islands-British Columbia (Burke, 1930; Clemens and Wilby, 1961; Isakson et al., 1971; Wilimovsky, 1954).
ABBL: southeastern Alaska.

**Polypera simushirae* (Gilbert and Burke). Kuril Islands (Burke, 1930; Shmidt, 1950; Ueno, 1970).

Rhinoliparis attenuatus Burke. Slim snailfish. Bering Sea; California (Burke, 1930; Grinols, 1965; Wilimovsky, 1954).

Rhinoliparis barbulifer Gilbert. Japan; Sakhalin; Sea of Okhotsk; Kamchatka; Bering Sea-California (Burke, 1930; Grinols, 1965; Jordan and Gilbert, 1899; Shmidt, 1950; Ueno, 1970; Wilimovsky, 1954).

Temnoecora candida (Gilbert and Burke). Bering Sea (Burke, 1930; Wilimovsky, 1954).
ABBL: Cook Inlet.

CARANGIDAE—jacks, scads, and pompanos

Trachurus symmetricus (Ayres). Jack mackerel. Southeastern Alaska-Baja California; mid-Pacific (tropical) (Grinols, 1965; Wilimovsky, 1954).

BRAMIDAE—pomfrets

Brama japonica Hilgendorf. Pacific pomfret. Korea; Japan; Kamchatka; Gulf of Alaska; California; cosmopolitan (Grinols, 1965; Hitz and French, 1965; Leim and Scott, 1966; Van Cleve and Thompson, 1938; Wilimovsky, 1954, 1964).

CARISTIIDAE—manefishes

**Caristius maeropus* (Bellotti). Manefish, false fanfish. Japan; British Columbia; North and South Atlantic Ocean (Clemens and Wilby, 1961; Grinols, 1965; Lindberg and Legeza, 1955; Taylor, 1967a, 1967b; Ueno, 1970; Welander, Alverson, and Bergman, 1957).

SCIAENIDAE—drums

Cynoscion nobilis (Ayres). White seabass. Southeastern Alaska-Baja California (Wilimovsky, 1954).

PENTACEROTIDAE—boarfishes

Pseudopentaceros richardsoni (Smith). Boarfish. Atlantic Ocean; Aleutian Islands; British Columbia; Washington (Follett and Dempster, 1963; Grinols, 1965; Honma and Mizusawa, 1966; Ueno, 1970; Welander, Johnson, and Hajny, 1957).

EMBIOTOCIDAE—surfperches

**Brachyistius frenatus* Gill. Kelp perch. Vancouver Island-Baja California (Tarp, 1952).

Cymatogaster aggregata Gibbons. Shiner perch. Southeastern Alaska-Baja California (Tarp, 1952; Taylor, 1967a; Wilimovsky, 1954).
ABBL: southeastern Alaska.

Embiotoca lateralis Agassiz. Striped seaperch. Southeastern Alaska-Baja California (Tarp, 1952; Wilimovsky, 1954).

**Hyperprosopon argenteum* Gibbons. Walleye surfperch.

Vancouver Island-Baja California (Tarp, 1952).

**Hyperprosopon ellipticum* (Gibbons). Silver surfperch.

British Columbia-southern California (Peden, 1966c; Tarp, 1952).

**Phanerodon furcatus* Girard. White seaperch. British Columbia-Baja California (Tarp, 1952).

Rhacochilus vacca (Girard). Pile perch. Southeastern Alaska-Baja California (Tarp, 1952).

SPHYRAENIDAE — barracudas

Sphyraena argentea Girard. Pacific barracuda. Gulf of Alaska-Baja California¹¹ (Van Cleve and Thompson, 1938; Wilimovsky, 1954).

TRICHODONTIDAE — sandfishes

Arctoscopus japonicus (Steindachner). Sailfin sandfish.

Sea of Japan; Sea of Okhotsk; western Kamchatka; Bering Sea; southeastern Alaska (record doubtful) (Jordan and Gilbert, 1899; Okada, 1955; Shmidt, 1950; Ueno, 1970; Wilimovsky, 1954).

Trichodon trichodon (Tilesius). Pacific sandfish, common hairtooth (Russ.).

Bering Sea; Aleutian Islands-California (Andriyash, 1937; Clemens and Wilby, 1961; Isakson et al., 1971; Jordan and Gilbert, 1899; Ueno, 1970; Wilimovsky, 1954, 1964).

ABBL: Bristol Bay; Alaska Peninsula; Shumagin Islands; Kenai Peninsula; Gulf of Alaska; southeastern Alaska.

BATHYMASTERIDAE — ronquils

Bathymaster caeruleofasciatus Gilbert and Burke. Alaskan ronquil.

Sea of Okhotsk; Bering Sea; Aleutian Islands; Kodiak Island; southeastern Alaska (Andriyash, 1937; Hubbard and Reeder, 1965; Isakson et al., 1971; McPhail, 1965; Shmidt, 1950; Ueno, 1970; Wilimovsky, 1954, 1964).

ABBL: Amchitka Island (Aleutian Islands); Gulf of Alaska; southeastern Alaska.

Bathymaster leurolepis McPhail. Smallmouth ronquil.

Northern Japan-Gulf of Alaska (McPhail, 1965).

ABBL: Cook Inlet.

Bathymaster signatus Cope. Searcher.

Eastern Kamchatka; Commander Islands; Pribilof Islands; Aleutian Islands; Bering Sea-Washington (Andriyash, 1937; Clemens and Wilby, 1961; Gilbert, 1895; Isakson et al., 1971; Jordan and Gilbert, 1899; Ueno, 1970; Wilimovsky, 1954, 1964).

ABBL: Alaska Peninsula; Shumagin Islands; Kodiak Island; Kenai Peninsula; Gulf of Alaska; Prince William Sound; Lituya Bay; southeastern Alaska.

Ronquilus jordani (Gilbert). Northern ronquil. Bering Sea-California (Clemens and Wilby, 1961; Gilbert, 1895; Isakson et al., 1971; Jordan and Gilbert, 1899; Wilimovsky, 1954, 1964).

ABBL: Alaska Peninsula; Kodiak Island; Montague Island; southeastern Alaska.

ANARHICHIADIDAE — wolffishes

Anarhichas orientalis Pallas. Bering wolffish. Tatar Strait; Sea of Okhotsk; Petropavlovsk; Bering Sea; Norton Sound (Andriyash, 1954; Jordan and Gilbert, 1899; Popov, 1933; Shmidt, 1950; Ueno, 1970; Wilimovsky, 1954).

ABBL: Bristol Bay.

Anarrhichthys ocellatus Ayres. Wolf-eel.

Sea of Japan; Sea of Okhotsk; Petropavlovsk; Aleutian Islands; Gulf of Alaska-California (Grinols, 1965; Jordan and Gilbert, 1899; LeBrasseur, 1964; Popov, 1933; Roedel, 1953; Shmidt, 1950; Taylor, 1967a; Wilimovsky, 1954, 1964).

ABBL: southeastern Alaska.

¹¹ Personal communication, 1958, J. B. Kirkwood, Battelle Memorial Institute, Columbus Laboratories, 505 King Avenue, Columbus, Ohio 43201.

STICHAEIDAE — pricklebacks

Acantholumpenus mackayi (Gilbert). Pighead prickleback.

Northern Sea of Japan; Tatar Strait; Sea of Okhotsk; Bering Sea; Aleutian Islands (Jordan and Gilbert, 1899; Makushok, 1958; Ueno, 1970; Wilimovsky, 1964).

ABBL: Bristol Bay.

Alectridium aurantiacum Gilbert and Burke. Lesser prickleback.

Sea of Okhotsk; Petropavlovsk; Bering Sea (Gilbert and Burke, 1912; Peden, 1967; Shmidt, 1950; Wilimovsky, 1954).

**Allolumpenus hypochromus* Hubbs and Schultz. Y-prickleback.

Vancouver Island (Clemens and Wilby, 1961; Hubbs and Schultz, 1932).

Anisarchus medioides Reinhardt. Stout eelblenny.

Sea of Japan; Sea of Okhotsk; Anadyr Gulf; Chukchi Sea; Bering Sea; southeastern Alaska; Arctic Alaska; North Atlantic to Novaya Zemlya (Andriyashev, 1937, 1954; Jordan and Gilbert, 1899; Leim and Scott, 1966; Quast, 1968; Shmidt, 1950; Ueno, 1970; Walters, 1955; Wilimovsky, 1954).
ABBL: Aleutian Islands; Alaska Peninsula; Shumagin Islands; Cook Inlet; southeastern Alaska.

Anoplarchus insignis Gilbert and Burke. Slender cockscomb.

Aleutian Islands-Puget Sound (Gilbert and Burke, 1912; Peden, 1966b).

Anoplarchus purpureoceans Gill. High cockscomb.

Bering Sea; Aleutian Islands; California (Isakson et al., 1971; Peden, 1966b; Wilimovsky, 1954, 1964).

ABBL: Prince William Sound; southeastern Alaska.

**Azygopterus corallinus* Andriyashev and Makushok.

Kuril Islands (Andriyashev and Makushok, 1955; Ueno, 1970).

Bryostemma tarsodes Jordan and Snyder. Bering Sea (Wilimovsky, 1954).

Bryozoichthys lysimus (Jordan and Snyder). Nutcracker prickleback.

Sea of Okhotsk; Bering Sea; St. Matthew

Island; Aleutian Islands (Andriyashev, 1937; Shmidt, 1950; Wilimovsky, 1954).

Bryozoichthys marjorius McPhail.

Unalaska Island-southeastern Alaska (McPhail, 1970).

Chirolophis nugator (Jordan and Williams). Mosshead warbonnet.

Kodiak Island; southeastern Alaska; Strait of Georgia; northern California (Clemens and Wilby, 1961; Hubbard and Reeder, 1965; Isakson et al., 1971; Quast, 1968).
ABBL: southeastern Alaska.

Chirolophis polyactocephalus (Pallas). Decorated warbonnet.

Sea of Okhotsk; Petropavlovsk; Bering Sea-Washington (Andriyashev, 1937, 1954; Jordan and Gilbert, 1899; Shmidt, 1950; Wilimovsky, 1954, 1964).

ABBL: Kodiak Island.

**Chirolophis snyderi* (Taranetz).

Sakhalin; Sea of Okhotsk; Petropavlovsk; western Bering Sea (Andriyashev, 1954; Ueno, 1970).

Doloepis gigantea Kittlitz. Giant wrymouth.

Unalaska Island; Krenitzin Islands; Bering Sea-California (Jordan and Gilbert, 1899; Wilimovsky, 1954, 1964).

ABBL: southeastern Alaska.

Eumesogrammus praecisus (Krøyer). Four-line snakeblenny.

Sea of Okhotsk; Bering Sea; Arctic Alaska; Hudson Bay; North Atlantic Ocean (Andriyashev, 1937, 1954; Leim and Scott, 1966; Shmidt, 1950; Vladkyov, 1933; Walters, 1955; Wilimovsky, 1954).

ABBL: Chukchi Sea.

Gymnoclinus cristulatus Gilbert and Burke. Trident prickleback.

Bering Sea (Isakson et al., 1971; Wilimovsky, 1954).

Leptoclinus maculatus (Fries). Langbarn, spotted lumpenus (Russ.).

Sea of Japan; Sea of Okhotsk; Anadyr Gulf; Arctic Alaska; Bering Strait; North Atlantic Ocean; Aleutian Islands-Washington (Andriyashev, 1937, 1954; Jordan and Gilbert, 1899; Leim and Scott, 1966; Peden, 1966c; Shmidt, 1950; Ueno, 1970; Wilimovsky, 1954, 1964).

ABBL: Alaska Peninsula; Shumagin Islands; Kodiak Island; Cook Inlet; southeastern Alaska.

Lumpenella longirostris (Evermann and Goldsborough). Longsnout prickleback.

Sea of Okhotsk; Gulf of Alaska-British Columbia (Clemens and Wilby, 1961; Shmidt, 1950; Ueno, 1970; Wilimovsky, 1954).

ABBL: Kodiak Island; Gulf of Alaska; southeastern Alaska.

Lumpenus fabricii (Valenciennes). Slender eelblenny.

Sea of Japan; Sea of Okhotsk; Bering Sea; Chukchi Sea; Arctic Alaska; southeastern Alaska; North Atlantic Ocean to Novaya Zemlya (Andriyashev, 1937, 1954; Jordan and Gilbert, 1899; Leim and Scott, 1966; Quast, 1968; Shmidt, 1950; Vladkyov, 1933; Walters, 1955; Wilimovsky, 1954).

ABBL: Chukchi Sea; Cook Inlet; southeastern Alaska.

Lumpenus sagitta Wilimovsky. Snake prickleback.

Sea of Japan; Sakhalin; Bering Sea; Aleutian Islands-California (Jordan and Gilbert, 1899; Okada, 1955; Ueno, 1970; Wilimovsky, 1954, 1956, 1964).

ABBL: Alaska Peninsula; Kenai Peninsula; southeastern Alaska.

Lyconectes aleutensis Gilbert. Dwarf wry-mouth, red devil.

Bering Sea-California (Gilbert and Thompson, 1905; Jordan and Gilbert, 1899; Wilimovsky, 1954, 1964).

ABBL: Aleutian Islands; Alaska Peninsula; Gulf of Alaska; southeastern Alaska.

Phytichthys chiru (Jordan and Gilbert). Ribbon prickleback.

Bering Sea; Aleutian Islands; Gulf of Alaska (Isakson et al., 1971; Jordan and Gilbert, 1899; Wilimovsky, 1954, 1964).

**Plectobranchus evides* Gilbert. Bluebarred prickleback.

British Columbia-California (Clemens and Wilby, 1961; Gilbert and Thompson, 1905).

Poroclinus rothrocki Bean. Whitebarred blenny.

Bering Sea-California (Isakson et al., 1971; Jordan and Gilbert, 1899; Wilimovsky,

1954, 1964).

ABBL: southeastern Alaska.

Stichaeus punctatus (Fabricius). Arctic shanny.

Sea of Japan; Sea of Okhotsk; Bering Sea; Chukchi Sea; Arctic Alaska; southeastern Alaska (Andriyashev, 1937, 1954; Jordan and Gilbert, 1899; Leim and Scott, 1966; Shmidt, 1950; Vladkyov, 1933; Walters, 1955; Ueno, 1970; Wilimovsky, 1954).

ABBL: Chukchi Sea; southeastern Alaska.

Xiphister atropurpureus (Kittlitz). Black prickleback.

Kodiak Island; southeastern Alaska-Baja California (Hubbard and Reeder, 1965; Jordan and Gilbert, 1899; Wilimovsky, 1954).

ABBL: southeastern Alaska.

Xiphister mucosus (Girard). Rock prickleback. Southeastern Alaska-California (Wilimovsky, 1954).

ABBL: southeastern Alaska.

PTILICHTHYIDAE — quillfishes

Ptilichthys goodei Bean. Quillfish.

Kuril Islands; Okhotsk Sea; Bering Sea; Aleutian Islands; Washington (Andriyashev, 1937; Clemens and Wilby, 1961; Grinols, 1965; Jordan and Gilbert, 1899; Wilimovsky, 1954, 1964).

ABBL: Frederick Sound; southeastern Alaska.

PHOLIDIDAE — gunnels

Apodichthys flavidus Girard. Penpoint gunnel. Kodiak Island; southeastern Alaska-California (Hubbard and Reeder, 1965; Wilimovsky, 1954).

ABBL: Middleton Island, Prince William Sound; southeastern Alaska.

**Pholidapus dybowskii* (Steindachner).

Sea of Japan; Hokkaido; Kuril Islands; Sea of Okhotsk; Petropavlovsk (Jordan and Gilbert, 1899; Shmidt, 1950; Ueno, 1970).

**Pholis clemensi* Rosenblatt. Longfin gunnel. British Columbia (Rosenblatt, 1964).

Pholis dolichogaster (Pallas). Stippled gunnel. Sea of Japan; Kuril Islands; Sea of Okhotsk;

Petropavlovsk; Commander Islands; Bering Sea; Norton Sound; Aleutian Islands (Andriyashov, 1954; Isakson et al., 1971; Jordan and Gilbert, 1899; Popov, 1933; Shmidt, 1950; Ueno, 1970; Wilimovsky, 1954, 1964).

Pholis fasciata (Bloch and Schneider). Banded gunnel.

Peter the Great Bay; Japan; Kuril Islands; Sea of Okhotsk; Petropavlovsk; Pribilof Islands; Bristol Bay; Hudson Bay; Labrador; Greenland (Jordan and Gilbert, 1899; Leim and Scott, 1966; Shmidt, 1950; Ueno, 1970; Vladivostok, 1933).

Pholis gilli Evermann and Goldsborough. Bering gunnel.

Bering Sea (Wilimovsky, 1954).

ABBL: Bristol Bay.

Pholis laeta (Cope). Crescent gunnel.

Bering Sea; Aleutian Islands-northern California (Clemens and Wilby, 1961; Isakson et al., 1971; Wilimovsky, 1954, 1964).

ABBL: Cook Inlet; Prince William Sound; southeastern Alaska.

Pholis ornata (Girard). Saddleback gunnel.

Bering Sea-California (Jordan and Gilbert, 1899; Ueno, 1970; Wilimovsky, 1954).

**Pholis pictus* (Kner).

Sea of Japan; Aniva Bay (Sakhalin); Sea of Okhotsk; Kuril Islands; Petropavlovsk (Jordan and Gilbert, 1899; Popov, 1933; Shmidt, 1950; Ueno, 1970).

**Pholis schultzi* Hubbs. Red gunnel.

British Columbia-California (Peden, 1966a).

SCYTALINIDAE — graveldivers

Scytalina cerdale Jordan and Gilbert. Gravel-diver.

Aleutian Islands; Bering Sea-California (Quast, 1968; Wilimovsky, 1954, 1964).

ABBL: southeastern Alaska.

ZAPRORIDAE — prowfishes

Zaprora silenus Jordan. Prowfish.

Japan; Kamchatka; Aleutian Islands; Gulf of Alaska-California (Grinols, 1965; LeBrasseur, 1964; Shmidt, 1950; Taylor,

1967a; Ueno, 1970; Wilimovsky, 1954, 1964).

ABBL: Gulf of Alaska; southeastern Alaska.

ICOSTEIDAE — ragfishes

Icosteus aenigmaticus Lockington. Ragfish. Southeastern Alaska-California (Clemens and Wilby, 1961; Grinols, 1965; Ueno, 1970; Wilimovsky, 1954).

ABBL: Gulf of Alaska; southeastern Alaska.

AMMODYTIDAE — sand lances

Ammodytes hexapterus Pallas. Pacific sand lance, sandling (Russ.).

Sea of Japan; Sea of Okhotsk; Bering Sea; Chukchi Sea; Arctic Alaska; Hudson Bay; Aleutian Islands; Alaska Peninsula; Gulf of Alaska-California (Andriyashov, 1937, 1954; Gilbert, 1895; Isakson et al., 1971; Jordan and Gilbert, 1899; LeBrasseur, 1964; Seaford, 1899; Shmidt, 1950; Taylor, 1967a; Ueno, 1970; Walters, 1955; Wilimovsky, 1954, 1964).

ABBL: Chukchi Sea; Bering Sea; Cook Inlet; southeastern Alaska.

TRICHIURIDAE — cutlassfishes

**Benthodesmus simonyi* (Steindachner). Frost-fish, cutlassfish. Atlantic Ocean; British Columbia, widespread (Grinols, 1965).

SCOMBRIDAE — mackerels and tunas

**Euthynnus pelamis* (Linnaeus). Skipjack tuna. British Columbia-southern California (unverified Alaska record, 1964) (Clemens and Wilby, 1961; Leim and Scott, 1966).

Sarda chiliensis (Cuvier). Pacific bonito. Eastern Pacific Ocean; southeastern Alaska (Manzer, 1965; Quast, 1964).

ABBL: Northern Gulf of Alaska; southeastern Alaska.

Scomber japonicus Houttuyn. Chub mackerel. Taiwan-Sakhalin; southeastern Alaska-Baja

California (Okada, 1955; Ueno, 1970; Wilimovsky, 1954).

Thunnus alalunga (Bonnaterre). Albacore. China Sea; Sea of Japan; southeastern Alaska; worldwide (Collette and Gibbs, 1963; Leim and Scott, 1966; Neave and Hanavan, 1960; Okada, 1955; Ueno, 1970; Wilimovsky, 1964).

Thunnus thynnus (Linnaeus). Bluefin tuna. Kuril Islands-South Seas; Hawaiian Islands; Korean coast; worldwide (Collette and Gibbs, 1963; Okada, 1955; Ueno, 1970).
ABBL: Alaska Peninsula on Shelikof Strait.

CENTROLOPHIDAE — rudderfishes

Ieiehthys lockingtoni Jordan and Gilbert. Medusafish, brown rudderfish. Japan; Gulf of Alaska-California (Grinols, 1965; Taylor, 1967a).

TETRAGONURIDAE — squaretails

**Tetragonurus cuvieri* Risso. Smalleye squaretail.

North Atlantic Ocean; Mediterranean; southwestern Pacific Ocean; Japan; tropical mid-Pacific Ocean; British Columbia; California (Grinols, 1965; Ueno, 1970; Welander and Alverson, 1954).

BOTHIDAE — lefteye flounders

Citharichthys sordidus (Girard). Pacific sanddab.

Bering Sea; Aleutian Islands-California (Grinols, 1965; Norman, 1934; Taylor, 1967a; Wilimovsky, 1954, 1964).

Citharichthys stigmaeus Jordan and Gilbert. Speckled sanddab.

Southeastern Alaska-Baja California (Norman, 1934; Wilimovsky, 1954).

ABBL: Ketchikan.

PLEURONECTIDAE — righteye flounders

Atheresthes evermanni Jordan and Starks. Kamchatka flounder, Asiatic arrowtooth, paltus (Russ.).

Sea of Japan; Sea of Okhotsk; Anadyr Gulf; Commander Islands; western Bering Sea (Andriyashev, 1937; Norman, 1934; Shmidt, 1950; Ueno, 1970).

Atheresthes stomias (Jordan and Gilbert). Arrowtooth flounder, arrowtooth, paltus (Russ.), American arrowtooth (Russ.).

Chukchi Sea; Bering Sea; Aleutian Islands-California (Andriyashev, 1937; Grinols, 1965; Isakson et al., 1971; Jordan and Gilbert, 1899; Norman, 1934; Pruter and Alverson, 1962; Roedel, 1953; Scofield, 1899; Taylor, 1967a; Wilimovsky, 1954, 1964).

ABBL: Shumagin Islands; Kodiak Island; Lituya Bay; southeastern Alaska.

**Clidoderma aspernum* (Temminck and Schlegel). Rough-scale sole.

Yellow Sea; Sea of Japan; Sea of Okhotsk; Kuril Islands; Sakhalin; Commander Islands; British Columbia (Andriyashev, 1937; Grinols, 1965; Norman, 1934; Shmidt, 1950; Ueno, 1970; Welander, Alverson, and Bergman, 1957).

Embassichthys bathybius (Gilbert). Deepsea sole.

Gulf of Alaska-California (Clemens and Wilby, 1961; Fitch, 1966a; Grinols, 1965; Hubbs, 1959; Norman, 1934; Welander and Alverson, 1954; Wilimovsky, 1954).

ABBL: Gulf of Alaska.

Eopsetta jordani (Lockington). Petrale sole, brill.

Gulf of Alaska-Baja California (Grinols, 1965; Norman, 1934; Taylor, 1967a; Wilimovsky, 1954).

ABBL: Yakutat.

Glyptocephalus zachirus Lockington. Rex sole, long-finned sole.

Bering Sea-California (Andriyashev, 1937; Grinols, 1965; Isakson et al., 1971; Jordan and Gilbert, 1899; Norman, 1934; Taylor, 1967a; Wilimovsky, 1954).

ABBL: West of Kodiak Island; Cook Inlet; Kenai Peninsula; southeastern Alaska.

Hippoglossoides elassodon Jordan and Gilbert. Flathead sole, halibut-like flounder (Russ.).

Sea of Japan-Chukchi Sea; Commander Islands; Bering Strait-Oregon (Andriyashev, 1937; Clemens and Wilby, 1961; Grinols,

1965; Isakson et al., 1971; Jordan and Gilbert, 1899; Norman, 1934; Shmidt, 1950; Taylor, 1967a; Ueno, 1970; Walters, 1955; Wilimovsky, 1954).

ABBL: Gulf of Alaska; southeastern Alaska.

Hippoglossoides robustus Gill and Townsend.
Bering flounder.

Tatar Strait-Chukchi Sea; Bering Sea; Aleutian Islands (Andriyashev, 1937, 1954; Jordan and Gilbert, 1899; Norman, 1934; Pruter and Alverson, 1962; Shmidt, 1950; Ueno, 1970; Wilimovsky, 1954).

Hippoglossus stenolepis Schmidt. Pacific halibut, whitesided paltus (Russ.).

Sea of Japan-Anadyr Gulf; Bering Sea-California (Andriyashev, 1937, 1954; Grinols, 1965; Isakson et al., 1971; Leim and Scott, 1966; Norman, 1934; Roedel, 1953; Shmidt, 1950; Taylor, 1967a; Thompson, 1915a; Thompson and Van Cleve, 1936; Ueno, 1970; Wilimovsky, 1954).

ABBL: Shelikof Strait; southeastern Alaska.

Isopsetta isolepis (Lockington). Butter sole.
Aleutian Islands-California (Grinols, 1965; Norman, 1934; Wilimovsky, 1954, 1964; Yesaki and Wolotira, 1968).

ABBL: Bering Sea; Gulf of Alaska; southeastern Alaska.

Lepidopsetta bilineata (Ayres). Rock sole, two-lined flounder (Russ.), white-bellied flounder (Russ.).

Sea of Japan; Sea of Okhotsk; Commander Islands; Bering Sea-California (Andriyashev, 1937, 1954; Grinols, 1965; Isakson et al., 1971; Jordan and Gilbert, 1899; Norman, 1934; Roedel, 1953; Scofield, 1899; Shmidt, 1950; Taylor, 1967a; Ueno, 1970; Wilimovsky, 1954).

ABBL: Pribilof Islands; Kodiak Island; Kenai Peninsula; southeastern Alaska.

Limanda aspera (Pallas). Yellowfin sole, yellow-finned flounder (Russ.).

Sea of Japan-Chukchi Sea; Bering Sea-British Columbia (Andriyashev, 1954; Clemens and Wilby, 1961; Jordan and Gilbert, 1899; Norman, 1934; Popov, 1933; Pruter and Alverson, 1962; Shmidt, 1950; Ueno, 1970; Walters, 1955; Wilimovsky, 1954).

ABBL: Chukchi Sea; Pribilof Islands; Shelikof Strait; Cook Inlet; southeastern Alaska.

Limanda proboscidea Gilbert. Longhead dab, longsnouted flounder (Russ.).

Sea of Okhotsk; Bering Sea (Andriyashev, 1937, 1954; Jordan and Gilbert, 1899; Norman, 1934; Shmidt, 1950; Ueno, 1970; Wilimovsky, 1954).

ABBL: Chukchi Sea; Bering Sea; Bristol Bay.

Liopsetta glacialis (Pallas). Arctic flounder, polar flounder (Russ.).

Sea of Okhotsk-Bering Strait; Arctic Ocean from White Sea eastward to Bathurst Inlet; Labrador (Andriyashev, 1954; Jordan and Gilbert, 1899; Norman, 1934; Pruter and Alverson, 1962; Scofield, 1899; Walters, 1955; Wilimovsky, 1954).

ABBL: Beaufort Sea.

**Liopsetta obscura* (Herzenstein). Dark flounder (Russ.).

Yellow Sea; Sea of Japan; Alaska (record doubtful) (Jordan and Gilbert, 1899; Norman, 1934; Shmidt, 1950; Ueno, 1970; Wilimovsky, 1954).

Lyopsetta exilis (Jordan and Gilbert). Slender sole.

Southeastern Alaska-Baja California (Grinols, 1965; Norman, 1934; Taylor, 1967a; Wilimovsky, 1954).

ABBL: Lituya Bay; southeastern Alaska.

Micromesistius pacificus (Lockington). Dover sole.

Aleutian Islands; Bering Sea-Baja California (Fitch, 1966a; Grinols, 1965; Jordan and Gilbert, 1899; Norman, 1934; Taylor, 1967a; Wilimovsky, 1954, 1964).

ABBL: Gulf of Alaska; southeastern Alaska.

Parophrys vetulus Girard. English sole.

Gulf of Alaska-Baja California (Grinols, 1965; Norman, 1934; Taylor, 1967a; Wilimovsky, 1954).

ABBL: Aleutian Islands; Kodiak Island; Gulf of Alaska; southeastern Alaska.

Platichthys stellatus (Pallas). Starry flounder.

Bering Strait-Sea of Japan-Coronation Gulf-California (Andriyashev, 1937, 1954; Jordan and Gilbert, 1899; Norman, 1934; Okada, 1955; Popov, 1933; Pruter and Alverson, 1962; Roedel, 1953; Scofield, 1899; Shmidt, 1950; Taylor, 1967a; Ueno, 1970; Walters,

1953, 1955; Wilimovsky, 1954).

ABBL: Alaska Peninsula; Cook Inlet; southeastern Alaska.

Pleuronectes quadrituberculatus Pallas. Alaska plaice, yellow-bellied flounder (Russ.).

Peter the Great Bay-Chukchi Sea; Bering Sea; Washington (Andriyashev, 1937, 1954; Jordan and Gilbert, 1899; Pruter and Alverson, 1962; Scofield, 1899; Shmidt, 1950; Townsend, 1936; Wilimovsky, 1954).

ABBL: Bristol Bay; Gulf of Alaska; Cook Inlet; southeastern Alaska.

Pleuronichthys coenosus Girard. C-O sole.

Southeastern Alaska-Baja California (Norman, 1934; Wilimovsky, 1954).

Pleuronichthys decurrens Jordan and Gilbert. Curlfin sole.

Southeastern Alaska-Baja California (Grinols, 1965; Norman, 1934; Wilimovsky, 1954).

Psettidichthys melanostictus Girard. Sand sole. Gulf of Alaska-California (Clemens and Wilby,

1961; Norman, 1934; Wilimovsky, 1954).

ABBL: Gulf of Alaska.

Reinhardtius hippoglossoides (Walbaum).

Greenland halibut, black paltus (Russ.), bluesided paltus (Russ.).

Japan-Bering Sea; California; arctic parts of Atlantic Ocean; Barents Sea (Andriyashev, 1937; Best, 1963; Hubbs and Wilimovsky, 1964; Leim and Scott, 1966; Nikolskii, 1954; Norman, 1934; Schott, 1966; Shmidt, 1950; Ueno, 1970; Westrheim and Pletcher, 1966).

ABBL: Chukchi Sea; Bering Sea; Pribilof Islands; Aleutian Islands.

MOLIDAE — ocean sunfish

**Mola mola* Linnaeus. Ocean sunfish.

Southeastern Alaska-California (Alaskan records not verified) (Leim and Scott, 1966; Ueno, 1970; Wilimovsky, 1954).

LITERATURE CITED

ALVERSON, D. L.

1951. New records for marine fishes from southeastern Alaska. *Copeia* 1951:86.

ALVERSON, D. L., and A. D. WELANDER.

1952. Notes on the scorpaenid fishes of Washington and adjacent areas, with a key for their identification. *Copeia* 1952:138-143.

ANDRIYASHEV, A. P.

1937. K poznaniyu ikhtiofauny Beringova i Chukotskogo morei (A contribution to the knowledge of the fishes from the Bering and Chukchi Seas). Issled. Morei 25 (Issled. Dal'nevostoč. Morei 5), Leningrad, p. 292-355. [Transl. by L. Lanz with N. J. Wilimovsky. 1955. U.S. Fish Wildl. Serv., Spec. Sci. Rep. Fish. 145, 81 p.]

1954. Ryby severnykh morei SSSR (Fishes of the northern seas of the USSR). Akad. Nauk SSSR, Zool. Inst., Opredeliteli po Faune SSSR 53, 566 p. [Transl. by Israel Program Sci. Transl., 1964, 617 p.; avail. U.S. Dep. Commer., Natl. Tech. Inf. Serv., Springfield, Va., as OTS 63-11160.]

1955a. O nakhozhdenii na glubine bolee 7 km novoi ryby iz sem. morskikh sliznei (Pisces, Liparidae) [A new fish of the lumpfish family (Pisces, Liparidae) found at a depth of more than 7 kilometers]. Akad. Nauk SSSR, Tr. Zool. Inst. 12:340-344. [Transl. by Israel Program Sci. Transl., 1963; in A. P. Andriyashev: Selected

taxonomic papers on northern marine fishes, p. 50-54; avail. U.S. Dep. Commer., Natl. Tech. Inf. Serv., Springfield, Va., as OTS 61-31030.]

1955b. Obzor ugrevednykh likodov [*Lycenchelys* Gill (Pisces, Zoarcidae) i blizkie formy] morei SSSR i sopredelnykh vod [A review of the genus *Lycenchelys* Gill (Pisces, Zoarcidae) and related forms in the seas of the U.S.S.R. and adjacent waters]. Akad. Nauk SSSR, Tr. Zool. Inst. 18:349-384. [Transl. by Israel Program Sci. Transl.; in A. P. Andriyashev: Selected taxonomic papers on northern marine fishes, 1963, p. 1-36; avail. U.S. Dep. Commer., Natl. Tech. Inf. Serv., Springfield, Va., as OTS 61-31030.]

1958. Dobavlenie k obzoru ugrevednykh likodov (*Lycenchelys* Gill) s opisaniem trekh novykh vidov iz Kurilo-Kanchatskoj vpadiny (An addition to the review of *Lycenechelys* Gill, with a description of three new species from the Kurilo-Kamchatkan Trench). Vop. Ikhtiol. 11:171-180. [Transl. by Israel Program Sci. Transl.; in A. P. Andriyashev: Selected taxonomic papers on northern marine fishes, 1963, p. 37-46; avail. U.S. Dep. Commer., Natl. Tech. Inf. Serv., Springfield, Va., as OTS 61-31030.]

ANDRIYASHEV, A. P., and V. M. MAKUSHOK.

1955. *Azygopterus corallinus* (Pisces, Blennioidei) — novaya ryba bez parnykh plavnikov [*Azygopt-*

- terus corallinus* (Pisces, Blennioidei) — A new fish without paired fins]. Vop. Ikhtiol. 3:50-53. [Transl. by L. Penny, 5 p.; avail. Natl. Mar. Fish. Serv., Natl. Syst. Lab., U.S. Natl. Mus., Wash., D.C.]
- ARON, W.
1962. The distribution of animals in the eastern North Pacific and its relationship to physical and chemical conditions. J. Fish. Res. Board Can. 19:271-314.
- BAILEY, R. M., J. E. FITCH, E. S. HERALD, E. A. LACHNER, C. C. LINDSEY, C. R. ROBINS, and W. B. SCOTT.
1970. A list of common and scientific names of fishes from the United States and Canada. 3d ed. Am. Fish. Soc., Spec. Publ. 6, 149 p.
- BAILEY, R. E., and C. G. GRUCHY.
1970. *Ocecella* to supersede *Occa* for a genus of agonid fishes. J. Fish. Res. Board Can. 27:981-983.
- BARRACLOUGH, W. E., and T. H. BUTLER.
1965. First record of the dusky sculpin (*Icelinus burchami*) in British Columbia waters. J. Fish. Res. Board Can. 22:1305-1307.
- BARSUKOV, V. V.
1964. Opredelitel' ryb semeistva Scorpaenidiae (Key to the fishes of the family Scorpaenidiae). Tr. Vses. Nauchn.-issled. Inst. Morsk. Rybn. Khoz. Okeanogr. 53 (and Izv. Tikhookean. Nauchn.-issled. Inst. Rybn. Khoz. Okeanogr. 52):233-266. [Transl. by Israel Program Sci. Transl., 1968; in Soviet Fisheries Investigations in the northeast Pacific, Part III, p. 226-262; avail. Natl. Tech. Inf. Serv., Springfield, Va., as TT67-51205.]
1970. Vidovoy sostav roda *Sebastes* v severnoi chasti Tikhogo okeana (Species composition of genus *Sebastes* in the North Pacific and description of a new species). Dokl. Akad. Nauk SSSR 195:994-997. [Transl. in Dokl. Biol. Sci. 195(1-6): 760-763, by Consultants Bureau, Plenum Publishing Corp., New York, 1971.]
- BAYLIFF, W. H.
1959. Notes on the taxonomy and distribution of certain zoarcid fishes in the northeastern Pacific. Copeia 1959:78-80.
- BEAN, T. H.
1881. A preliminary catalogue of the fishes of Alaskan and adjacent waters. Proc. U.S. Natl. Mus. 4:239-272.
- BEKKER, V. E.
1964. Tonkokhvostye svetyashchiesya anchovy (rody *Lowenia*, *Tarletonbeania*, *Gonichthys* i *Centrobranichus*) Tikhogo i Indiiskogo okeanov. Sistematika i rasprostranenie. [Slender-tailed luminescent anchovies (genera *Lowenia*, *Tarletonbeania*, *Gonichthys*, and *Centrobranichus*) of the Pacific and Indian Oceans, systematics and distribution]. Akad. Nauk SSSR, Tr. Inst. Okeanol. 73:1-74. [Transl. by Israel Program Sci. Transl., 1966; in T. S. Rass (editor), Fishes of the Pacific and Indian Oceans, biology and distribution, p. 10-78; avail. U.S. Dep. Commer., Natl. Tech. Inf. Serv., Springfield, Va. as TT65-50120.]
- BERG, L. S.
1931. [A review of the lampreys of the northern hemisphere.] Ezheg. Zool. Muz. (Akad. Nauk SSSR) 32:87-116.
- BEST, E. A.
1963. Greenland halibut, *Reinhardtius hippoglossoides* (Walbaum), added to California fauna. Calif. Fish Game 49:213-214.
- BEST, E. A., and P. J. ELDRIDGE.
1969. Range extension of flag rockfish (*Sebastodes rubrivinctus*) to Aleutian Islands. J. Fish. Res. Board Can. 26:1955-1956.
- BOLIN, R. L.
1939. A review of the myctophid fishes of the Pacific coast of the United States and of lower California. Stanford Ichthyol. Bull. 1:89-156.
1944. A review of the marine cottid fishes of California. Stanford Ichthyol. Bull. 3:1-135.
1959. Inniomi. Myctophidae from the "Michael Sars" North Atlantic Deep-Sea Expedition, 1910. Rep. Sci. Results "Michael Sars" North Atl. Deep-Sea Exped., 1910, Vol. 4, Part 2, No. 7, 45 p.
- BRIGGS, J. C.
1955. A monograph of the clingfishes (order Xenopterygii). Stanford Ichthyol. Bull. 6:1-224.
1960. Fishes of worldwide (circumtropical) distribution. Copeia 1960:171-180.
- BRIGHT, D. B.
1960. A record of the porbeagle, *Lamna nasus*, from Cook Inlet, Alaska. Copeia 1960:145-146.
- BURKE, V.
1930. Revision of the fishes of the family Liparidae. U.S. Natl. Mus. Bull. 150:1-204.
- CARL, G. C., W. A. CLEMENS, and C. C. LINDSEY.
1959. The fresh-water fishes of British Columbia. Br. Columbia Prov. Mus., Dep. Recreation Serv., Handb. 5 (revised), 192 p.
- CLEMENS, W. A., and G. V. WILBY.
1961. Fishes of the Pacific coast of Canada. Fish. Res. Board Can., Bull. 68, 2d ed., 443 p.
- COHEN, D. M.
1956. The synonymy and distribution of *Leuroglossus stilbius* Gilbert, a North Pacific bathypelagic fish. Stanford Ichthyol. Bull. 7:19-23.
1964. Suborder Argentinoidea. In Fishes of the western North Atlantic, Mem. Sears Found. Mar. Res. 1, Part 4, p. 1-70. Yale University, New Haven, Conn.
1966. The North Pacific deepsea fish name *Bathylagus milleri* Gilbert, a senior synonym of *Bathylagus alascanus* Chapman. Copeia 1966: 877-878.
- COLLETTE, B. B., and R. H. GIBBS, JR.
1963. A preliminary review of the fishes of the family Scombridae. In H. Rosa, Jr. (editor), Proceedings of the world scientific meeting on the biology of tunas and related species, FAO Fish Rep. No. 6, 1:23-32.
- DAVENPORT, D.
1966. Colour variant of bocaccio (*Sebastodes paucispinis*) in British Columbia waters. J. Fish. Res. Board Can. 23:1981.

DRYFOOS, R. L.

1961. Four range extensions of fishes from the northeastern Pacific. *Copeia* 1961:476-477.

EBELING, A. W.

1962. Melamphaidae I, systematics and zoogeography of the species in the bathypelagic fish genus *Melamphaes* Günther. *Dana-Rep.* 58, Carlsberg Found., 164 p.

EVERMANN, B. W., and E. L. GOLDSBOROUGH.

1907. The fishes of Alaska. *Bull. U.S. Bur. Fish.* 26:219-360. (Doc. 624.)

FITCH, J. E.

1951. Studies and notes on some California marine fishes. *Calif. Fish Game* 37:111-120.

1966a. Fishes and other marine organisms taken during deep trawling off Santa Catalina Island, March 3-4, 1962. *Calif. Fish Game* 52:216-219.

1966b. The poacher *Asterothicha infaspinata* (Gilbert) added to California's marine fauna, and a key to California Agonidae (Pisces). *Calif. Fish Game* 52:121-124.

FOLLETT, W. I.

1952. Annotated list of fishes obtained by the California Academy of Sciences during six cruises of the U.S.S. *Mulberry* conducted by the United States Navy off central California in 1949 and 1950. *Proc. Calif. Acad. Sci.* 27(Ser. 4):399-432.

FOLLETT, W. I., and L. J. DEMPSTER.

1963. Relationships of the percoid fish *Pentaceros richardsoni* Smith, with description of a specimen from the coast of California. *Proc. Calif. Acad. Sci.* 32(Ser. 4):315-338.

FORRESTER, C. R., and R. M. WILSON.

1963. A further record of the blacktail snailfish, *Careproctus melanurus* Gilbert, from British Columbia waters. *J. Fish. Res. Board Can.* 20:1095-1096.

GIBBS, R. H.

1960. *Alepisaurus brevirostris*, a new species of lancetfish from the western North Atlantic. *Breviora* 123:1-14.

GILBERT, C. H.

1890. Scientific results of explorations by the U.S. Fish Commission steamer Albatross. *Proc. U.S. Natl. Mus.* 13:49-126.

1895. The ichthyological collections of the steamer Albatross during the years 1890 and 1891. *U.S. Comm. Fish and Fish.*, Part 19, Rep. Comm. 1893:393-476.

1915. Fishes collected by the United States fisheries steamer "Albatross" in southern California in 1904. *Proc. U.S. Natl. Mus.* 48:305-380.

GILBERT, C. H., and C. V. BURKE.

1912. Fishes from the Bering Sea and Kamchatka. *Bull. U.S. Bur. Fish.* 30:31-96 (Doc. 754).

GILBERT, C. H., and J. C. THOMPSON.

1905. Notes on the fishes of Puget Sound. *Proc. U.S. Natl. Mus.* 28:973-987.

GILL, T., and C. H. TOWNSEND.

1897. Diagnoses of new species of fishes found in the Bering Sea. *Proc. Biol. Soc. Wash.* 11:231-234. [Not seen.]

GORDON, M. S., and R. H. BACKUS.

1957. New records of Labrador fishes with special reference to those of Hebron fjord. *Copeia* 1957:17-20.

GREENWOOD, P. H., D. E. ROSEN, S. H. WEITZMAN, and G. S. MYERS.

1966. Phyletic studies of teleostean fishes with a provisional classification of living forms. *Bull. Am. Mus. Nat. Hist.* 131:339-456.

GREY, M.

1956. The distribution of fishes found below a depth of 2000 meters. *Fieldiana Zool.* 36:73-337.

GRINOLS, R. B.

1965. Check-list of the offshore marine fishes occurring in the northeastern Pacific Ocean, principally off the coasts of British Columbia, Washington, and Oregon. *M.S. Thesis, Univ. Wash., Seattle*, 217 p.

1966a. Northeastern Pacific records of *Anoplogaster cornuta* Valenciennes (Anoplogasteridae: Pisces) and *Cyema atrum* Günther (Cyemidae: Pisces). *J. Fish. Res. Board Can.* 23:305-307.

1966b. Southern occurrence of *Acantholiparis opercularis* Gilbert and Burke in the eastern subarctic Pacific region. *J. Fish. Res. Board Can.* 23:935-937.

1966c. Northern records of the zoarcid, *Melanostigma pammelas*, in the eastern subarctic Pacific region. *Copeia* 1966:601-602.

GRUCHY, C. G.

1970. *Ocella impi*, a new species of sea poacher from British Columbia with notes on related species. *J. Fish. Res. Board Can.* 27:1109-1114.

HARLING, W. R.

1966. Northern range extension for the pygmy rockfish (*Sebastodes wilsoni*). *J. Fish. Res. Board Can.* 23:1967-1968.

HEARD, W. R.

1966. Observations on lampreys in the Naknek River system of southwest Alaska. *Copeia* 1966: 332-339.

HEYAMOTO, H., and C. R. HITZ.

1962. Northern range extension of three species of rockfish (*Sebastodes rubrivenetus*, *S. aurora*, and *S. helvomaculatus*). *Copeia* 1962:847-848.

HITZ, C. R.

1965. Field identification of the northeastern Pacific rockfish (*Sebastodes*). *U.S. Fish Wildl. Serv., Circ.* 203, 58 p.

HITZ, C. R., and R. R. FRENCH.

1965. Occurrence of pomfret (*Brama japonica*) in the northeastern Pacific Ocean. *U.S. Fish Wildl. Serv., Fish. Ind. Res.* 3(1):1-7.

HONMA, Y., and R. MIZUSAWA.

1966. Further additions to "A list of the fishes collected in the Province of Echigo, including Sado Island" (VIII). *Jap. J. Ichthyol.* 14:53-61.

HUBBARD, J. D., and W. G. REEDER.

1965. New locality records for Alaska fishes. *Copeia* 1965:506-509.

- HUBBS, C. L.
- 1942. Peculiar variants of the agonid fish *Odonotopxix trispinosus*. J. Fish. Res. Board Can. 6:30-36.
 - 1959. Initial discoveries of fish faunas on sea-mounts and offshore banks in the eastern Pacific. Pac. Sci. 13:311-316.
 - 1967. Occurrence of the Pacific lamprey, *Entosphenus tridentatus*, off Baja California and in streams of southern California; with remarks on its nomenclature. Trans. San Diego Soc. Nat. Hist. 14:301-312.
- HUBBS, C. L., G. W. MEAD, and N. J. WILMOVSKY.
- 1953. The widespread, probably antitropical, distribution and the relationship of the bathypelagic iniomous fish *Anoptopterus pharao*. Bull. Scripps Inst. Oceanogr., Univ. Calif. 6:173-198.
- HUBBS, C. L., and L. P. SCHULTZ.
- 1932. A new blenny from British Columbia with records of two other fishes new to the region. Biol. Board Can., Contribution Can. Biol. Fish. (New Ser.) 7:319-324.
 - 1934a. *Elephantichthys copeianus*, a new cyclopterid fish from Alaska. Copeia 1934:21-26.
 - 1934b. The reef liparid fishes inhabiting the west coast of the United States. J. Pan-Pac. Res. Inst. 9:2-7.
 - 1941. Contribution to the ichthyology of Alaska, with descriptions of two new fishes. Univ. Mich., Mus. Zool., Occas. Pap. 431, 31 p.
- HUBBS, C. L., and N. J. WILMOVSKY.
- 1964. Distribution and synonymy in the Pacific Ocean, and variation, of the Greenland halibut, *Reinhardtius hippoglossoides* (Walbaum). J. Fish. Res. Board Can. 21:1129-1154.
- ISAKSON, J. S., C. A. SIMENSTAD, and R. L. BURGNER.
- 1971. Fish communities and food chains in the Amchitka area. BioScience 21:666-670.
- ISHIYAMA, R.
- 1967. Fauna Japonica, Rajidae. Biogeogr. Soc. Japan, Tokyo. 84 p.
- JORDAN, D. S., and B. W. EVERMANN.
- 1896-1900. The fishes of North and Middle America. U.S. Natl. Mus. Bull. 47, Part I (1896), Part II (1898), Part III (1898), Part IV (1900), 3313 p.
- JORDAN, D. S., B. W. EVERMANN, and H. W. CLARK.
- 1930. Check list of the fishes and fishlike invertebrates of North and Middle America north of the northern boundary of Venezuela and Columbia. U.S. Comm. Fish and Fish., Part II, Rep. Comm. 1928, Append. X, 670 p.
- JORDAN, D. S., and C. H. GILBERT.
- 1899. The fishes of the Bering Sea. In David Starr Jordan (editor), The fur seals and fur-seal islands of the North Pacific Ocean, Part 3, p. 433-492. Govt. Print. Off., Wash., D.C.
- JORDAN, D. S., and E. C. STARKS.
- 1895. The fishes of Puget Sound. Proc. Calif. Acad. Sci. (Ser. 2) 5:785-855.
 - 1904. A review of the Cottidae or sculpins found in the waters of Japan. Proc. U.S. Natl. Mus. 27:231-335.
- KOBAYASHI, K., M. MIKAWA, and J. ITO.
- 1968. Descriptions of the young and one immature adult specimens of coster dory, *Allocyttus verucosus* (Gilchrist) from the northern part of the Pacific. Bull. Fac. Fish., Hokkaido Univ. 19:1-5.
- KOBAYASHI, K., and T. UENO.
- 1966. Record of a bathypelagic melamphid fish, *Promitra (Melamphaes) cristiceps* (Gilbert) obtained from the stomach of salmon taken in the North Pacific Ocean. Jap. J. Ichthyol. 13:213-219.
- LAVENBERG, R. J., and J. E. FITCH.
- 1966. Annotated list of fishes collected by midwater trawl in the Gulf of California, March-April 1964. Calif. Fish Game 52:92-110.
- LEBRASSEUR, R. J.
- 1964. Data record, collections of fish taken in Isaacs-Kidd midwater trawl from northeastern Pacific Ocean 1958-59. Fish. Res. Board Can., Manuser. Rep. Ser. (Oceanogr.-Limnol.) 175, 25 p.
- LEIM, A. H., and W. B. SCOTT.
- 1966. Fishes of the Atlantic coast of Canada. Fish. Res. Board Can., Bull. 155, 485 p.
- LINDBERG, G. U., and M. I. LEGEZA.
- 1955. Obzor rodov i vidov ryb podsemeistva Cyclopterinae (Pisces) [Review of genera and species of fishes of the subfamily Cyclopterinae (Pisces)]. Akad. Nauk SSSR, Tr. Zool. Inst. 18:389-458. [Transl. by Israel Program Sci. Transl., 1964, 75 p.; avail. U.S. Dep. Commer., Natl. Tech. Inf. Serv., Springfield, Va. as OTS 61-31032.]
- MAKUSHOK, V. M.
- 1958. Morfologicheskie osnovy sistemy stikhvezvykh i blizkikh k nim semeistv ryb Stichaeidae, Blennioidei, Pisces. [The morphology and classification of the northern blennioid fishes (Stichaeidae, Blennioidae: Pisces)]. Akad. Nauk SSSR, Tr. Zool. Inst. 25:3-129. [Transl. by Alice R. and William A. Gosline, 1959, 105 p.; avail. Natl. Mar. Fish. Serv., Natl. Syst. Lab., U.S. Natl. Mus., Wash., D.C.]
 - 1964. O vidovom tozhdestve *Nematonurus longifilis* (Günther, 1877) i *N. clarki* (Jordan et Gilbert, 1898) i nekotorye zamechaniya o vozrastnoi izmenchivosti u Macruridae (Pisces) [The specific identity of *Nematonurus longifilis* (Günther, 1877) and *N. clarki* (Jordan and Gilbert, 1898) and some remarks on age-dependent variations in Macruridae (Pisces)]. Akad. Nauk SSSR, Tr. Inst. Okeanol. 73:139-162. [Transl. by Israel Program Sci. Transl., 1966, In T. S. Rass (editor), Fishes of the Pacific and Indian Oceans, biology and distribution. p. 147-172; avail. U.S. Dep. Commer., Natl. Tech. Inf. Serv., Springfield, Va., as TT65-50120.]
- MANZER, J. I.
- 1965. *Sarda lineolata* (Girard), a Pacific bonito, in the Strait of Georgia, British Columbia. J. Fish. Res. Board Can. 22:853-855.
- MARSHALL, N. B.
- 1955. Studies of alepisauroid fishes. Discovery Rep. 27:303-336.

- McALLISTER, D. E.
- 1960. List of the marine fishes of Canada. Natl. Mus. Can. Bull. 168:1-76. 1961.
 - 1961. A collection of oceanic fishes from off British Columbia with a discussion of the evolution of black peritoneum. Natl. Mus. Can. Bull. 172: 39-43.
 - 1963. A revision of the smelt family, Osmeridae. Natl. Mus. Can. Bull. 191:1-53.
- McALLISTER, D. E., and C. C. LINDSEY.
- 1961. Systematics of the freshwater sculpins (*Cottus*) of British Columbia. Natl. Mus. Can. Bull. 172:66-89.
- McALLISTER, D. E., and S. J. WESTRHEIM.
- 1965. Widow rockfish, *Sebastodes entomelas*, new to British Columbia waters. J. Fish. Res. Board Can. 22:1559-1561.
- McPHAUL, J. D.
- 1965. A new ronquil, *Bathymaster leurolepis*, from the Aleutian Islands. J. Fish. Res. Board Can. 22:1293-1297.
 - 1970. A new species of prickleback, *Bryozoichthys majorius* (Chirolophinae), from the eastern North Pacific. J. Fish. Res. Board Can. 27:2362-2365.
- McPHAUL, J. D., and C. C. LINDSEY.
- 1970. Freshwater fishes of northwestern Canada and Alaska. Fish. Res. Board Can., Bull. 173, 381 p.
- MEAD, G. W., and F. H. C. TAYLOR.
- 1953. A collection of oceanic fishes from off northeastern Japan. J. Fish. Res. Board Can. 10: 560-582.
- MORROW, J. E.
- 1965. First record of the trout perch, *Percopsis*
- MUKHACHEVA, V. A.
- 1954. Naibolee mnogochislennaya glubokovodnaya ryba dal'nevostochnykh morei—Tsklotona—*Cyclothone microdon* Günther (Pisces, Gonostomidae) [The most numerous deep-sea fish in far eastern seas—the cyclothone—*Cyclothone microdon* Günther (Pisces, Gonostomidae)]. Akad. Nauk SSSR, Tr. Inst. Okeanol. 11:206-219. [Transl. by Israel Program Sci. Transl., 1960, 17 p.; avail. U.S. Dep. Commer., Natl. Tech. Inf. Serv., Springfield, Va., as OTS 60-21110.]
 - 1964. O vidovom sostave roda *Cyclothone* (Pisces, Gonostomidae) v Tikhom okeane [The composition of species of the genus *Cyclothone* (Pisces, Gonostomidae) in the Pacific Ocean]. Akad. Nauk SSSR, Tr. Inst. Okeanol. 73:93-138. [Transl. by Israel Program Sci. Transl., 1966; in T. S. Rass (editor), Fishes of the Pacific and Indian Oceans, biology and distribution, p. 98-146; avail. U.S. Dep. Commer., Natl. Tech. Inf. Serv., Springfield, Va., as TT65-50120.]
- NEAVE, F., and M. G. HANAVAN.
- 1960. Seasonal distribution of some epipelagic fishes in the Gulf of Alaska region. J. Fish. Res. Board Can. 17:221-233.
- NIKOLSKII, G. V.
- 1954. Chastnaya ikhtiologii (Special ichthyology). 2d ed. Gosudarstvennoe Izdatelstvo, Moscow, 458 p. [Transl. by Israel Program Sci. Transl.,
- 1961, 538 p.; avail. U.S. Dep. Commer., Natl. Tech. Inf. Serv., Springfield, Va., as OTS 60-21817.]
- NORMAN, J. R.
- 1934. A systematic monograph of the flatfishes (Heterosomatidae). Vol. 1, Psettodidae, Bothidae, Pleuronectidae. Brit. Mus. (Nat. Hist.), London, 459 p. [Reprinted 1966 by Johnson Reprint Corporation, New York.]
- ODEMAR, M. W.
- 1964. Southern range extension of the eulachon, *Thaleichthys pacificus*. Calif. Fish Game 50: 305-307.
- OKADA, Y.
- 1955. Fishes of Japan. Maruzen Co. Ltd., Tokyo. 434 p.
- OKAMURA, O.
- 1970. Fauna Japonica, Macrourina. Academic Press of Japan, Tokyo. 216 p.
- PEDEN, A. E.
- 1964. A systematic revision of the Hemilepidotinae, a subfamily of cottid fishes. M.S. Thesis, Univ. Br. Columbia, Vancouver, 162 p.
 - 1966a. Occurrences of the fishes *Pholis schultzi* and *Liparis mucosus* in British Columbia. J. Fish. Res. Board Can. 23:313-316.
 - 1966b. Reexamination of two species in the stichaeid genus, *Anoplarchus*. Copeia 1966: 340-345.
 - 1966c. Rare marine fishes from British Columbia with first records of silver perch, *Hyperprosopon ellipticum*, and shanny, *Leptoclinus maculatus*. J. Fish. Res. Board Can. 23:1277-1279.
 - 1967. Redescription of a North Pacific prickleback, *Alectridium auranticum*. J. Fish. Res. Board Can. 24:1-8.
 - 1968. Two new specimens of the notacanthid fish *Macdonaldia challengerii* in the eastern North Pacific Ocean. J. Fish. Res. Board Can. 25: 181-188.
 - 1970. A new cottid fish, *Nautichthys robustus*, from Alaska and British Columbia. Natl. Mus. Nat. Sci. Publ. Biol. Oceanogr. 2:1-10.
- PHILLIPS, J. B.
- 1957. A review of the rockfishes of California (Family Scorpaenidae). Calif. Dep. Fish Game, Fish Bull. 104, 158 p.
 - 1966. Skilfish, *Eriolepis zonifer* (Lockington), in Californian and Pacific Northwest waters. Calif. Fish Game 52:151-156.
- PHINNEY, D. E., and M. L. DAHLBERG.
- 1968. Western range extension of the surf smelt, *Hypomesus pretiosus pretiosus*. J. Fish. Res. Board Can. 25:203-204.
- PINKAS, L.
- 1967. First record of a Pacific cod in southern California waters. Calif. Fish Game 53:127-128.
- POPOV, A. M.
- 1933. Fishes of Avatcha Bay on the southern coast of Kamtchatka. Copeia 1933:59-67.
- PRUTER, A. T., and D. L. ALVERSON.
- 1962. Abundance, distribution, and growth of flounders in the southeastern Chukchi Sea. J. Cons. 27:81-99.

- QUAST, J. C.
- 1960. The fishes of the family Hexagrammidae: their classification, variation, and osteology. Ph.D. Thesis, Univ. Calif. Los Angeles, 380 p.
 - 1964. Occurrence of the Pacific bonito in coastal Alaskan waters. *Copeia* 1964:448.
 - 1968. New records of thirteen cottoid and blennioid fishes for southeastern Alaska. *Pac. Sci.* 22:482-487.
 - 1971. *Sebastes variegatus*, sp. n. from the northeastern Pacific Ocean (Pisces, Scorpaenidae). *Fish. Bull.*, U.S. 69:387-398.
- RASS, T. S.
- 1954. Glubokovodnye ryby dal'nevostochnykh morei SSSR (Deep-sea fish of far eastern seas of the USSR). *Zool. Zh.* 33:1312-1324. [Transl. by Israel Program Sci. Transl., 1960, 22 p.; avail. U.S. Dep. Commer., Natl. Tech. Inf. Serv., Springfield, Va., as OTS 60-21099.]
- ROEDEL, P. M.
- 1953. Common ocean fishes of the California coast. *Calif. Dep. Fish Game, Fish Bull.* 91, 184 p.
- ROFEN, R. R.
- 1966. Family Paralepididae. In *Fishes of the western North Atlantic*, Mem. Sears Found. Mar. Res. 1, Part 5, p. 205-461. Yale University, New Haven, Conn.
- ROSENBLATT, R. H.
- 1964. A new gunnel, *Pholis clemensi*, from the coast of western North America. *J. Fish. Res. Board Can.* 21:933-939.
- ROSENBLATT, R. H., and L.-C. CHEN.
- 1972. The identity of *Sebastes babcocki* and *Sebastes rubrivinctus*. *Calif. Fish Game* 58: 32-36.
- ROSENBLATT, R. H., and D. WILKIE.
- 1963. A redescription of the rare cottid fish, *Artedius meanyi*, new to the fauna of British Columbia. *J. Fish. Res. Board Can.* 20:1505-1511.
- ROYCE, W. F.
- 1963. First record of white shark (*Carcharodon carcharias*) from southeastern Alaska. *Copeia* 1963:179.
- SANDERCOCK, F. K., and N. J. WILIMOVSKY.
- 1968. Revision of the cottid genus *Enophrys*. *Copeia* 1968:832-853.
- SCHMIDT, P.
- 1927. A revision of the cottoid fishes of the genus *Artediellus*. *Proc. U.S. Natl. Mus.* 71:1-10.
- SCHOTT, J. W.
- 1966. A Greenland halibut, *Reinhardtius hippoglossoides* (Walbaum) recorded in southern California. *Calif. Fish Game* 52:55-56.
- SCHROEDER, W. C.
- 1940. Some deep sea fishes from the North Atlantic. *Copeia* 1940:231-238.
- SCHULTZ, L. P.
- 1936. Keys to the fishes of Washington, Oregon and closely adjoining regions. *Univ. Wash. Publ. Biol.* 2:103-228.
 - 1964. Family Sternoptychidae. In *Fishes of the western North Atlantic*, Mem. Sears Found.
- MAR. RES. 1, PART 4, p. 241-273. Yale University, New Haven, Conn.
- 1967. A new genus and new species of zoarcid fish from the North Pacific Ocean. *Proc. U.S. Natl. Mus.* 122(3598):1-5.
- SCOFIELD, N. B.
- 1899. List of fishes obtained in the waters of arctic Alaska. In David Starr Jordan (editor), *The fur seals and fur-seal islands of the North Pacific Ocean*, Part 3, p. 493-509. Govt. Print. Off., Wash., D.C.
- SHMIDT, P. YU.
- 1950. Ryby Okhotskogo morya (Fishes of the Sea of Okhotsk). Akad. Nauk SSSR., Tr. Tikhookean. Kom. 6, 370 p. [Transl. by Israel Program Sci. Transl., 1965, 392 p.; avail. U.S. Dep. Commer., Natl. Tech. Inf. Serv., Springfield, Va., as TT65-50022.]
- SVETOVIDOV, A. N.
- 1948. Treskoobraznye (Gadiformes). Akad. Nauk SSSR., Zool. Inst., Fauna SSSR, Ryhy 9(4), New Ser. 34, 221 p. [Transl. by Israel Program Sci. Transl., 1962, 304 p.; avail. U.S. Dep. Commer., Natl. Tech. Inf. Serv., Springfield, Va., as OTS 63-11071.]
- TARP, F. H.
- 1952. A revision of the family *Embiotocidae* (the surfperches). *Calif. Dep. Fish Game, Fish Bull.* 88, 99 p.
- TAYLOR, F. H. C.
- 1967a. Midwater trawl catches from Queen Charlotte Sound and the open ocean adjacent to the Queen Charlotte Islands. *Fish. Res. Board Can., Tech. Rep.* 11, 44 p.
 - 1967b. Unusual fishes taken by midwater trawl off the Queen Charlotte Islands, British Columbia. *J. Fish. Res. Board Can.* 24:2101-2115.
- THOMPSON, W. F.
- 1915a. A preliminary report on the life-history of the halibut. *Prov. Br. Columbia, Rep. Comm. Fish.*, 1914, p. 76-99.
 - 1915b. A new fish of the genus *Sebastodes* from British Columbia with notes on others. *Prov. Br. Columbia, Rep. Comm. Fish.*, 1914, p. 120-122.
- THOMPSON, W. F., and R. VAN CLEVE.
- 1936. Life history of the Pacific halibut. (2) Distribution and early life history. *Rep. Int. Fish. Comm.* 9, 184 p.
- TOWNSEND, L. D.
- 1936. Variations in the meristic characters of flounders from the northeastern Pacific. *Rep. Int. Fish. Comm.* 11, 24 p.
- TSUYUKI, H., and S. J. WESTRHEIM.
- 1970. Analysis of the *Sebastes aleutianus-S. melanostomus* complex, and description of a new scorpaenid species, *Sebastes caenacmaticus*, in the northeast Pacific Ocean. *J. Fish. Res. Board Can.* 27:2233-2254.
- UEENO, T.
- 1970. *Fauna Japonica, Cyclopteridae*. Academic Press of Japan, Tokyo. 233 p.

- VAILLANT, L.
1888. Poissons. In Expéditions scientifiques du Travailleur et du Talisman pendant les années 1880, 1881, 1882, 1883, 406 p. G. Masson, Paris.
- VAN CLEVE, R., and W. F. THOMPSON.
1938. A record of the pomfret and barracuda from Alaska. Copeia 1938:45-46.
- VLADYKOV, V. D.
1933. Biological and oceanographic conditions in Hudson Bay, 9. Fishes from the Hudson Bay region (except the Coregonidae). Contribution Can. Biol. Fish. 8:13-61.
- VLADYKOV, V. D., and W. I. FOLLETT.
1958. Redescription of *Lampetra ayresii* (Günther) of western North America, a species of lamprey (Petromyzontidae) distinct from *Lampetra fluviatilis* (Linnaeus) of Europe. J. Fish. Res. Board Can. 15:47-77.
- WALTERS, V.
1953. The fishes collected by the Canadian Arctic Expedition 1913-18 with additional notes on the ichthyofauna of western arctic Canada. Bull. Natl. Mus. Can. 128:257-274.
1955. Fishes of the western arctic America and eastern arctic Siberia, taxonomy and zoogeography. Bull. Am. Mus. Nat. Hist. 106:255-368.
- WATANABE, M.
1960. Fauna Japonica — Cottidae (Pisces). Tokyo News Service Ltd., Tokyo. 218 p.
- WELANDER, A. D., and D. L. ALVERSON.
1954. New and little known fishes of the eastern Pacific. Wash. Dep. Fish., Fish. Res. Pap. 1(2):37-44.
- WELANDER, A. D., D. L. ALVERSON, and P. BERGMAN.
1957. Rare fishes from the eastern North Pacific Ocean. Wash. Dep. Fish., Fish. Res. Pap. 2(1):60-66.
- WELANDER, A. D., R. C. JOHNSON, and R. A. HAJNY.
1957. Occurrence of the boar fish, *Pseudopentaceros richardsoni*, and the zeid, *Allocyttus verrucosus*, in the North Pacific. Copeia 1957: 244-246.
- WESTRHEIM, S. J.
1965. Northern range extensions for four species of rockfish (*Sebastodes goodei*, *S. helvomaculatus*, *S. rubrivinctus*, and *S. zacentrus*) in the North Pacific Ocean. J. Fish. Res. Board Can. 22: 231-235.
- 1966a. Northern range extension records for two rockfish species (*Sebastodes caurinus* and *S. elongatus*). J. Fish. Res. Board Can. 23:1455-1456.
- 1966b. Northern range extensions for three species of rockfish (*Sebastodes flavidus*, *S. pacificus*, and *S. pinniger*) in the North Pacific Ocean. J. Fish. Res. Board Can. 23:1469-1471.
1967. G. B. Reed groundfish cruise reports, 1963-66. Fish. Res. Board Can., Tech. Rep. 30, various pagination.
1968. First records of three rockfish species (*Sebastodes aurora*, *S. ciliatus*, and *Sebastolobus altivelis*) from waters off British Columbia. J. Fish. Res. Board Can. 25:2509-2513.
- WESTRHEIM, S. J., and F. T. PLETCHER.
1966. First records of the twoline eelpout, *Bothrocarus brunneum*, Greenland halibut, *Reinhardtius hippoglossoides*, and shortbelly rockfish, *Sebastodes jordani*, in British Columbia waters. J. Fish. Res. Board Can. 23:309-311.
- WESTRHEIM, S. J., and H. TSUYUKI.
1967. *Sebastodes recidi*, a new scorpaenid fish in the northeast Pacific Ocean. J. Fish. Res. Board Can. 24:1945-1954.
1971. Taxonomy, distribution, and biology of the northern rockfish, *Sebastodes pollicephalus*. J. Fish. Res. Board Can. 28:1621-1627.
- WILIMOVSKY, N. J.
1954. List of the fishes of Alaska. Stanford Ichthyol. Bull. 4:279-294.
1956. A new name, *Lampenus sagitta* to replace *Lampenus gracilis* (Ayres), for a northern blenniid fish (family Stichaeidae). Stanford Ichthyol. Bull. 7:23-24.
1958. Provisional keys to the fishes of Alaska. U.S. Fish Wildl. Serv., Fish. Res. Lab., Juneau, Alaska, 113 p. [Natl. Mar. Fish. Serv., Auke Bay Fish. Lab. Libr., Auke Bay, Alaska.]
1964. Inshore fish fauna of the Aleutian Archipelago. Proc. 14th Alaskan Sci. Conf., 1963, p. 172-190.
- WISNER, R. L.
1959. Distribution and differentiation of the North Pacific myctophid fish, *Tarletonbeania taylori*. Copeia 1959:1-7.
- YESAKI, M., and R. J. WOLOTIRA, JR.
1968. Extension of recorded range of butter sole, *Isopsetta isolepis*, into the Bering Sea. J. Fish. Res. Board Can. 25:1077-1078.

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