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## DEMERSAL FISHES COLLECTED IN THE SOUTHEASTERN SHELF WATERS OF ALASKA

Toru SASAKI\*

After the middle of the nineteen-sixties, owing to a gradual progress in fishing vessels and gears, the trawl-fishing ground was exceedingly exploited in southeastern Alaska as well as in the Bering Sea. This region is geographically located near the U.S.A. and Canada, being influenced by the warm Alaskan stream. So the region has an abundant and unique ichthyofauna. Some forerunning scientific investigations and exploratory trawl and longline fishings have positively been worked out by both nations, especially concerning some commercially important rockfishes (Phillips, 1957; Alverson *et al.*, 1964 and Westrheim, 1970). But little interest was attended until now on the other fishes, save by Evermann and Goldsbrough (1907), Schultz (1936), Roedel (1953), Wilimovsky (1954, 1958) and Clemens and Wilby (1961), etc. Their examinations were carried out mainly in the summer season and limited to the continental shelf waters. The present author preliminarily examined on fishes and invertebrates collected in the Gulf of Alaska by the *T.V. Oshoro Maru* of the Faculty of Fisheries, Hokkaido University during the summer of 1968 (Sasaki 1969, unpublished). Afterwards, he had an opportunity to accompany a research party for demersal fishes in southeastern Alaska during the summer of 1969 and the winter of 1969-1970. This paper lists the kinds of fishes and notes their collecting areas for the purpose of a comparison of the ichthyofauna in those regions. Previous results, and the present ones, reveal that important fishes, such as the rockfishes (Scorpaenidae), sablefish, Pacific halibut and walleye pollock are doubtlessly abundant resources in these waters.

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### Materials and methods

The fishes identified here were caught by the otter trawler, the *Koyo Maru* No. 2 of Hokuyo Fishery Co. Ltd., during the summer (May 15 to July 20, 1969)

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and the *Koyo Maru* No. 21 of the same company during the winter (December 27, 1969 to February 22, 1970) off southeastern Alaska. The trawler *Koyo Maru* No. 2 and No. 21 are 3456 and 549 gross tons, respectively. It seems to be rocky at the bottom of the region, judging from the shadows of the echosounder and

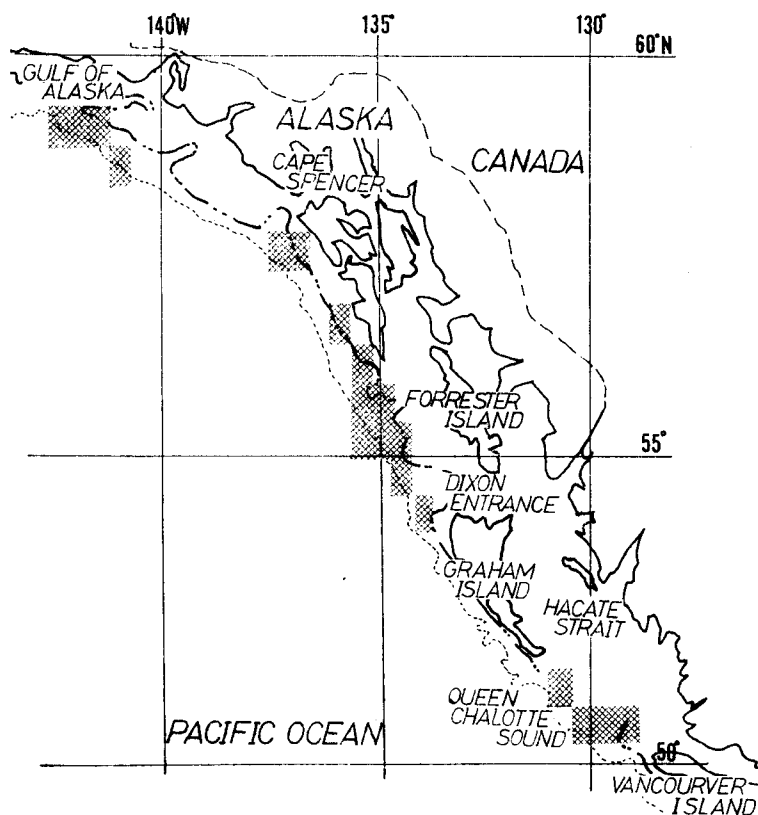


Fig. 1. Map of southeastern Alaska showing the collecting areas (■).

condition of catches. The number of samplings was 236 in the summer and 218 in the winter, being 454 in total. The trawling was operated between 180 m and 680 m in depth. These samples were preserved in 10% formalin sea water and brought back to land for identification.

In addition, English names, Japanese names, catch frequency and collecting area were presented. The English names were obtained from a list provided by the American Fisheries Society (1960).

The plus sign (+) and asterisk sign (\*) were marked for the species collected in summer and in winter, respectively.

## Results

Twenty-eight families including 44 genera and 72 species are listed in the present paper. There are 64 species referable to 26 families and 42 genera in summer and 49 species referable to 21 families and 31 genera in winter.

## Order Myxinida

## Family Myxinidae

1. *Polistotrema stoutii* (LOCKINGTON) +\* Pacific hagfish  
Rare; a single species collected in the Queen Charlotte Sound.

## Order Petromyzonida

## Family Petromyzonidae

2. *Entosphenus tridentatus* (GAIRDNER) + Pacific lamprey  
Nom. Jap. Mitsuba-Yatsume  
Rare; a single species collected in the north of Dixon Entrance.

## Order Lamnida

## Family Squalidae

3. *Squalus acanthias* LINNÉ +\* Spiny dogfish  
Nom. Jap. Abura-Tsuno-Zame  
Common; found in all investigating areas.

## Order Rajida

## Family Rajidae

4. *Raja binoculata* GIRARD \* Big skate  
Rather rare; a single species collected in the Queen Charlotte Sound.
5. *Raja rhina* JORDAN and GILBERT +\* Longnose skate  
Common; found in all investigating areas.
6. *Raja stellulata* JORDAN and GILBERT + Starry skate  
Rather rare; found mainly in northern investigating areas.
7. *Breviraja aleutica* (GILBERT) + Aleutian skate  
Nom. Jap. Arasuka-Kasube  
Rather common; found mainly in the Gulf of Alaska
8. *Breviraja permifera* (BEAN) \* Alaska skate  
Nom. Jap. Tsuno-Kasube  
Rather common; found mainly in the Gulf of Alaska.

## Order Chimaerida

## Family Chimaeridae

9. *Hydrolagus collieri* (LAY and BENNETT) + Ratfish  
Rather common; found mainly in the Queen Charlotte Sound.

## Order Clupeida

## Family Salmonidae

10. *Oncorhynchus tshawytscha* (WALBAUM) +\* Chinook salmon  
Nom. Jap. Masunosuke

Common; found mainly in the north of Dixon Entrance.

11. *Oncorhynchus nerka* (WALBAUM) +\* Sockeye salmon  
Nom. Jap. Beni-Zake

Common; found mainly in the north of Dixon Entrance.

Family Osmeridae

12. *Thaleichthys pacificus* (RICHARDSON) \* Eulachon  
Rather common; found mainly in northern investigating areas.

Family Chauliodontidae

13. *Chauliodus macouni* BEAN + Fanged viperfish  
Rare; found in abyssal waters deeper than 500 m.

Family Sternoptychidae

14. *Argyropelecus sladeni* REGAN + Silvery hatchetfish  
Rare; found in abyssal waters deeper than 500 m.

Order Myctophida

Family Myctophidae

15. *Lampanyctus leucopsarus* (EIGENMANN and EIGENMANN) +  
Smallfin lanternfish

Common; found mainly in abyssal waters.

16. *Myctophum* sp. +

Order Anguillida

Family Nemichthyidae

17. *Nemichthys avocetta* JORDAN and GILBERT + Threadfish  
Rare; a single species collected in abyssal waters in the Queen Charlotte Sound.

Order Percida

Family Zaproridae

18. *Zaprora silenus* JORDAN +\* Prowfish  
Nom. Jap. Bouzu-Ginpo  
Common; found mainly in the middle investigating areas.

Family Zoacidae

19. *Lycodes diapterus* GILBERT + Black eelpout  
Common; found mainly in northern investigating areas.

20. *Lycodes brevipes* BEAN +\* Shortfin eelpout  
Nom. Jap. Ashiboso-Genge  
Common; found mainly in northern investigating areas.

21. *Lycodes palearis* GILBERT + Wattle eelpout  
Nom. Jap. Hakusen-Gaji  
Common; found mainly in northern investigating areas.

Family Bathymasteridae

22. *Bathymaster signatus* COPE +\* Searcher  
Nom. Jap. Soko-Medama-Uo

Common; found in all investigating areas.

23. *Ronquilus jordani* (GILBERT) + Northern ronquil

Rather rare; a single species collected near the Dixon Entrance.

Family Anarrhichadidae

24. *Anarrhichthys ocellatus* AYRES +\* Wolf-eel

Nom. Jap. Ribon-Okami

Rare; two species collected off northern Graham Island.

Family Stichaeidae

25. *Chirolophis polyactcephalus* (PALLAS) +\* Decorated prickleback

Rather rare; found near the Dixon Entrance.

Order Cottida

Family Scorpaenidae

26. *Sebastes brevispinis* (BEAN) +\* Silvergray rockfish

Common; found in all investigating areas.

27. *Sebastes paucispinis* (AYRES) +\* Bocaccio

Common; found mainly in southern investigating areas.

28. *Sebastes entomelas* (JORDAN and GILBERT) +\* Widow rockfish

Common; found mainly in southern investigating areas.

29. *Sebastes melanops* (GILBERT) + Black rockfish

Rather rare; found mainly in southern investigating areas.

30. *Sebastes mystinus* (JORDAN and GILBERT) + Blue rockfish

Rather rare; found near the Dixon Entrance.

31. *Sebastes ciliatus* (TILESII) +\* Dusky rockfish

Common; found mainly in southern investigating areas.

32. *Sebastes rubrivinctus* (JORDAN and GILBERT) +\* Flag rockfish

Common; found mainly in southern investigating areas.

33. *Sebastes pinniger* (JORDAN and GILBERT) +\* Canary rockfish

Common; found in southern investigating areas.

34. *Sebastes ruberrimus* CRAMER + Turkeyred rockfish

Rather rare; found mainly near the Dixon Entrance.

35. *Sebastes aleutianus* JORDAN and GILBERT +\* Blackthroat rockfish

Common; found mainly in deep waters.

36. *Sebastes melanostomus* EIGENMANN and EIGENMANN +\* Blackgill rockfish

Common; found mainly in deep waters.

37. *Sebastes crameri* JORDAN +\* Blackmouth rockfish

Common; found in all investigating areas.

38. *Sebastes diploproa* (GILBERT) +\* Splitnose rockfish

Common; found in southern investigating areas.

39. *Sebastes pruniger* (JORDAN and GILBERT) +\* Redstripe rockfish

Common; found in all investigating areas.

40. *Sebastes helvomaculatus* (AYRES) +\* Rosethorn rockfish  
Common; found in all investigating areas.
  41. *Sebastes alutus* (GILBERT) +\* Pacific ocean perch  
Nom. Jap. Arasuka-Menuke  
Very common; found in all investigating areas.
  42. *Sebastes polyspinis* TARANETZ and MOISEEV \* Northern rockfish  
Nom. Jap. Kitano-Menuke  
Rare; a single species collected in the Gulf of Alaska.
  43. *Sebastes reedi* WESTRHEIM and TSUYUKI \* Yellowmouth rockfish  
Common; found in all investigating areas.
  44. *Sebastes zacentrus* (GILBERT) +\* Sharpchin rockfish  
Common; found in all investigating areas.
  45. *Sebastes elongatus* (AYRES) + Greenstriped rockfish  
Rare; a single species collected off the Forrester Island.
  46. *Sebastolobus alascanus* BEAN +\* Shortspine channel rockfish  
Nom. Jap. Arasuka-Kichiji  
Common; found in all investigating areas.
  47. *Sebastolobus altivelis* GILBERT + Longspine channel rockfish  
Common; found in shallow waters in all investigating areas.
- Family Anoplopomidae
48. *Anoplopoma fimbria* (PALLAS) +\* Sablefish  
Nom. Jap. Gin-Dara  
Common; found in deep waters in all investigating areas.
- Family Hexagrammidae
49. *Ophiodon elongatus* GILBERT +\* Ling cod  
Common; found mainly in middle and southern investigating areas.
  50. *Hexagrammos* sp. +
- Family Cottidae
51. *Malacocottus zonurus* BEAN + Blackfin sculpin  
Nom. Jap. Kobusi-Kajika  
Common; found in all investigating areas.
  52. *Icelinus tenuis* GILBERT +\* Spotfin sculpin  
Rather common; found mainly in the Queen Charlotte Sound.
  53. *Icelinus borealis* GILBERT \* Northern sculpin  
Rather common; found in all investigating areas.
  54. *Ulca bolini* MYERS + Bigmouth sculpin  
Nom. Jap. Kemusikajika-Modoki  
Rather common; found in northern investigating areas.
- Family Agonidae
55. *Asterotheca infraspinata* (GILBERT) +\* Spinycheek starsnout

Rather common; found in all investigating areas.

56. *Asterotheca pentacantha* (GILBERT) + Bigeye starsnout  
Rather common; found in all investigating areas.

Family Cyclopteridae

57. *Aptocyclus ventricosus* (PALLAS) + Smooth lumpsucker  
Nom. Jap. Hotei-Uo  
Rather common; found in all investigating areas.

Family Liparidae

58. *Careproctus melanurus* GILBERT +\* Blacktail snailfish  
Rather common; found mainly in southern investigating areas.

Order Pleuronectida

Family Pleuronectidae

59. *Ateresthes stomias* (JORDAN and GILBERT) +\* Arrowtooth flounder  
Nom. Jap. Arasuka-Abura-Garei  
Very common; found in all investigating areas.
60. *Hippoglossus stenolepis* SCHMIDT +\* Pacific halibut  
Nom. Jap. Ohyo  
Common; found in all investigating areas.
61. *Hippoglossoides elassodon* (JORDAN and GILBERT) +\* Flathead sole  
Nom. Jap. Uma-Garei  
Common; found mainly in northern investigating areas.
62. *Parophrys vetulus* GILBERT +\* English sole  
Rather common; found in all investigating areas.
63. *Glyptocephalus zachirus* LOCKINGTON +\* Rex sole  
Nom. Jap. Hirenaga-Nameta  
Common; found in all investigating areas.
64. *Microstomus pacificus* (LOCKINGTON) +\* Dover sole  
Common; found in all investigating areas.
65. *Embassichthys bathybius* (GILBERT) + Deepsea sole  
Rather rare; found mainly in deep waters in southern investigating areas.
66. *Eopsetta jordani* (LOCKINGTON) \* Petral sole  
Rather common; found in all investigating areas.

Order Gadida

Family Merlucciidae

67. *Merluccius productus* (AYRES) +\* Pacific hake  
Nom. Jap. Heiku  
Common; found mainly in southern investigating areas.

Family Gadidae

68. *Gadus macrocephalus* TILESIIUS +\* Pacific cod  
Nom. Jap. Ma-Dara



Common; found in all investigating areas.

69. *Theragra chalcogramma* (PALLAS) +\* Walleye pollock

Nom. Jap. Suketou-Dara

Common; found in all investigating areas.

70. *Antimora rostrata* GÜNTER + Longfin cod

Nom. Jap. Kanada-Dara

Rather common; found in deep waters in middle investigating areas.

Family Coryphaenoididae

71. *Coryphaenoides* sp. +\*

Order Icosteida

Family Icosteidae

72. *Icosteus aenigmaticus* LOCKINGTON + Ragfish

Nom. Jap. Irezumi-Konnyaku-Aji

Rare; a single species collected off Forrester Island.

### Summary

The investigation on demersal fishes off the coast of southeastern Alaska was carried out during the summer of 1969 and the winter of 1969-1970 using a distant water stern trawler. The fishes identified in this study include 72 species referable to 28 families and 44 genera (64 species referable to 26 families and 42 genera in summer and 49 species referable to 21 families and 31 genera in winter). They are systematically listed with their collecting areas and season.

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