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ICHTHYOFAUNA OF OSHORO BAY AND ADJACENT WATERS

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Oshoro Bay is situated at ca. 14.5 km west of Otaru Harbour in Hokkaido, facing the Japan Sea. Additional to the fact that the bay and adjacent waters are rich in the variety of habitat, the waters are influenced by a cold current from winter to spring and by the Tsushima warm current from summer to autumn. Therefore, the fauna of the waters is abundant and various.

On the ichthyofauna of the waters, about 147 species have been recorded by Mr. Toyoji Hikita (unpublished), since the Oshoro Marine Biological Station of Hokkaido University was established in 1908. With the exception of his manuscript, there are only two reports on the ichthyofauna of the Japan Sea coast of Hokkaido; Hikita & Misu ('51) and Kobayashi ('60).

The present list was made under the guidance of the late Prof. Shin-ichi Satō of the Faculty of Fisheries, Hokkaido University. Most specimens were collected since 1957 within the bay and from the adjacent waters by means of trinal nets, long lines, drag nets or in the course of shore sampling while the rest were taken from the fishing grounds off the bay and the adjacent waters by means of herring set nets, flatfish gill nets or sand lance set nets.

Thirty-seven families including 59 genera and 75 species are described in the present list. Most of them live within the bay at all times of the year, about 18 species among them being important for fisheries. *Oncorhynchus gorbuscha* and *O. masou* were collected off shore at the time of migration in spring. *Clupea pallasii* and *Padosecus sachi* migrate within the bay at their spawning seasons. Some cottoid and flat fishes were collected only from comparatively deep waters off shore. Some of the rare species are thought to be strangers carried by the warm current.

The author wishes to express his cordial thanks to the late Prof. Shin-ichi Satō and Prof. Shun Okada of Fac. Fish., Hokkaido Univ. for their various sorts of advice and kind encouragement in the prosecution of the work. His thanks are offered also to Dr. Hidejirō Niiyama, Dr. Keikichi Hamada, Mr. Takao Igarashi, Mr. Tamezō Yamazaki, Mr. Kazurō Shinta, Mr. Tadataka Takahashi, and Mr. Isao Yoshizaki for their valuable help in the collecting of the specimens.

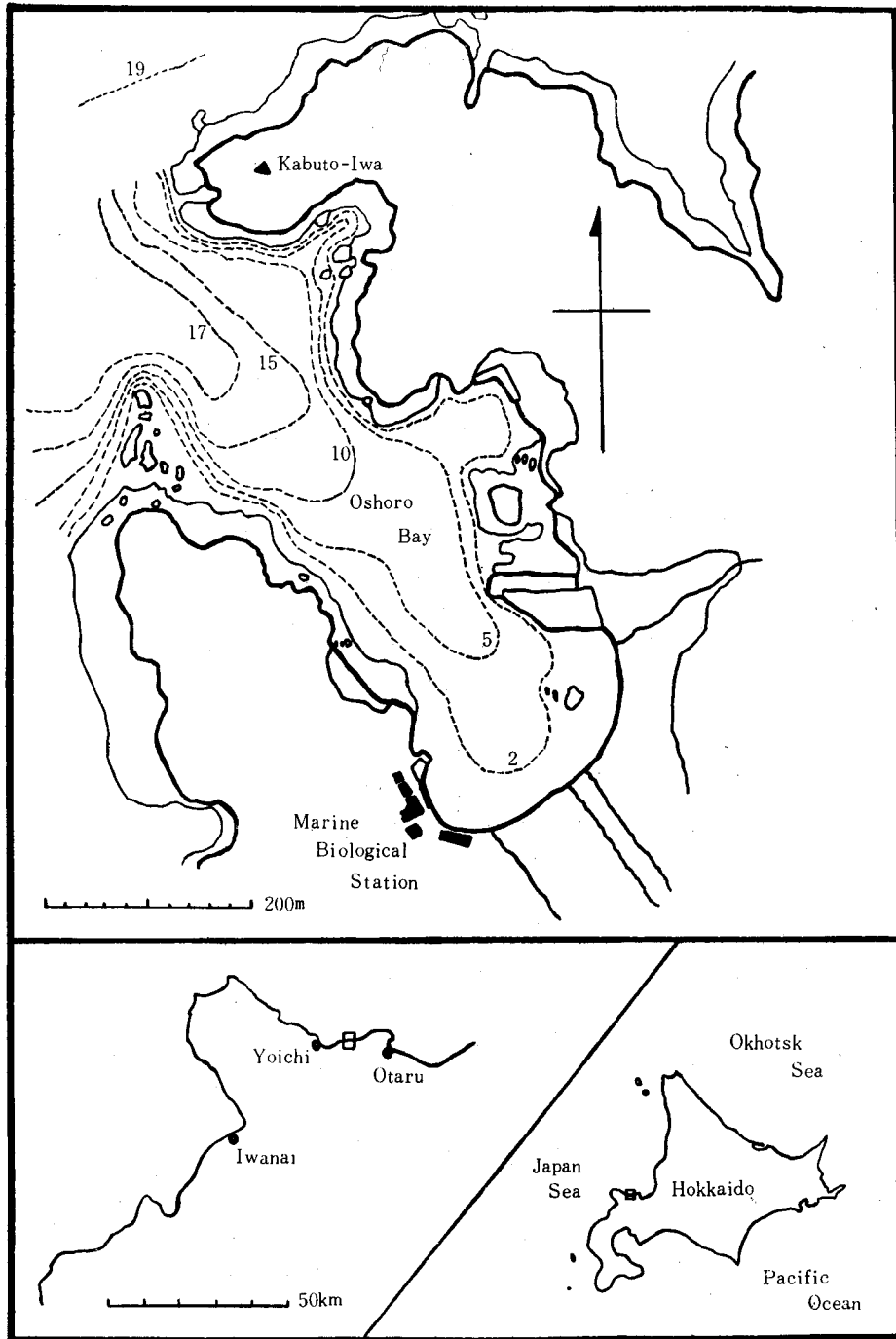


Fig. 1. Oshoro Bay and adjacent coast-line in Hokkaido, Japan

Family Triakidae1. *Mustelus manazo* BLEEKER

Nom. Jap. Hoshi-zame

Common; caught in various places off shore by means of bottom gill nets and within the bay by means of trinal nets in spring.

Family Rajidae2. *Raja pulchra* LIU

Nom. Jap. Megane-kasube

Common; caught in various places off shore by means of bottom gill nets.

Family Clupeidae3. *Clupea pallasii* CUVIER & VALENSIENNES

Nom. Jap. Nishin

Rather common; migrate into the bay in spring; young are sometimes obtained within the bay and from the adjacent waters at any time of the year by means of trinal nets and drag nets.

Family Engraulidae4. *Engraulis japonica* (HOULTUYN)

Nom. Jap. Katakuchi-iwashi

Common; found within the bay and from the adjacent waters from spring to winter.

Family Salmonidae5. *Oncorhynchus gorbuscha* (WALBAUM)

Nom. Jap. Karafuto-masu

Common; migrating off coast of the bay and adjacent waters in spring, mainly caught by means of salmon long line fishing.

6. *Oncorhynchus keta* (WALBAUM)

Nom. Jap. Sake

Rather common; young are collected from the inner coast within the bay from spring to summer.

7. *Oncorhynchus masou* (BREVOORT)

Nom. Jap. Sakura-masu (Ma-masu)

Common; migrating off coast in the adjacent waters in spring.

Family **Plecoglossidae**

8. *Plecoglossus altivelis* (TEMMINCK & SCHLEGEL)

Nom. Jap. Ayu

Rather rare; collected from the inner coast within the bay in spring.

Family **Osmeridae**

9. *Hypomesus olidus* (PALLAS)

Nom. Jap. Wakasagi

Common; collected from the inner coast of the bay in summer.

10. *Hypomesus japonicus* (BREVOORT)

Nom. Jap. Chika

Common; mainly collected within the bay and on the shore of Ranshima at all times of the year by means of drag nets.

Family **Salangidae**

11. *Salangichthys microdon* BLEEKER

Nom. Jap. Shira-uwo

Common; mainly collected within the bay and in adjacent waters in spring.

Family **Cyprinidae**

12. *Tribolodon hakonensis hakonensis* (GÜNTHER)

Nom. Jap. Ugui

Very common; found within the bay and in adjacent waters at all times of the year.

Family **Scombresocidae**

13. *Cololabis saira* (BREVOORT)

Nom. Jap. Sanma

Common; caught at many places off shore from summer to autumn.

Family **Hemiranphidae**

14. *Hemiramphus sajori* (TEMMINCK & SCHLEGEL)

Nom. Jap. Sayori

Rather rare; collected on the shore of Ranshima and in adjacent waters in summer.

Family **Gasterosteidae**

15. *Gasterosteus aculeatus aculeatus* (LINNÉ)

Nom. Jap. Itoyo

Rather rare; collected from the shore within the bay in spring.

Family Aulorhynchidae

16. *Aulichthys japonicus* BREVOORT

Nom. Jap. Kuda-yagara

Rather rare; collected from the inner coast of the bay in spring.

Family Syngnathidae

17. *Syngnathus schlegeli* KAUP

Nom. Jap. Yōji-uwo

Rather common; found in the so-called "Mo-ba" within the bay and in adjacent waters from spring to summer, by means of drag nets, set nets, etc.

18. *Hippocampus japonicus* KAUP

Nom. Jap. Kita-no-umi-uma

Very rare; one specimen collected from a shore near the bay in spring.

Family Trichodontidae

19. *Arctoscopus japonicus* (STEINDACHNER)

Nom. Jap. Hatahata

Rather rare; young were collected from the inner shores within the bay in spring.

Family Oplegnathidae

20. *Oplegnathus fasciatus* (TEMMINCK & SCHLEGEL)

Nom. Jap. Ishidai

Rather rare; caught within the bay in summer as an item in shore sampling.

Family Girellidae

21. *Girella punctata* GRAY

Nom. Jap. Mejina

Very rare; larval specimens collected at the tide pool within the bay in summer; perhaps strangers brought by the warm current.

Family Callionymidae

22. *Callionymus beniteguri* JORDAN & SNYDER

Nom. Jap. Tobinumeri

Common; collected on the sandy bottoms within the bay and in shore waters at Ranshima by means of drag nets and trinal nets.

Family **Ammodytidae**

23. *Ammodytes personatus* GIRARD

Nom. Jap. Ikanago

Very common; one of the most abundantly taken within the bay and in adjacent waters; mainly caught by means of sand lance set nets from spring to summer.

Family **Hypoptychidae**

24. *Hypoptychus dybowskii* STEINDACHNER

Nom. Jap. Shiwa-ikanago

Rather rare; materials in breeding season were collected within the bay in spring, by means of drag nets.

Family **Anarhichadidae**

25. *Anarhichas orientalis* PALLAS

Nom. Jap. Ōkami-uwo

Very rare; one specimen was collected from the deep off Oshoro Bay.

Family **Pholidae**

26. *Soldatovia polyactcephalum* PALLAS

Nom. Jap. Kita-fusa-ginpo

Common; found within the bay; mainly caught by means of trinal nets at all times of the year.

27. *Opisthocentrus ocellatus* (TILESIUS)

Nom. Jap. Gaji

Common; found on shores within the bay and in adjacent waters; collected by means of drag nets and as an item in shore sampling.

28. *Opisthocentrus zonope* JORDAN & SNYDER

Nom. Jap. Oki-kazunagi

Rather common; collected within the bay in summer, by means of drag nets.

29. *Pholis fasciatus* (BLOCH & SCHNEIDER)

Nom. Jap. Himo-ginpo

Common; found on shores within the bay and in adjacent waters; collected by means of drag nets and as an item in shore sampling.

30. *Pholis ornatus* (GIRARD)

Nom. Jap. Aya-ginpo

Common; found within the bay; collected by means of drag nets, trinal nets

and as an item in shore sampling.

Family Stichaeidae

31. *Ernogrammus hexagrammus* (TEMMINCK & SCHLEGEL)

Nom. Jap. Musuji-gaji

Common; found within the bay; collected by means of drag nets, etc.

32. *Stichaeus grigorjewi* HERZENSTEIN

Nom. Jap. Naga-zuka

Rather common; mainly caught off the bay and adjacent waters in spring by means of flat fish gill nets.

Family Gobiidae

33. *Tridentiger trionocephalus* (GILL)

Nom. Jap. Shima-haze

Rare; collected at the inner shores within the bay in summer by means of drag nets.

34. *Rhinogobius gymnauchen* (BLEEKER)

Nom. Jap. Hime-haze

Rare; collected at the inner shores within the bay in summer by means of drag nets.

35. *Pterogobius zacalles* JORDAN & SNYDER

Nom. Jap. Ryūgū-haze

Very rare; collected at the shore within the bay in summer by angling.

36. *Chaenogobius urotaenia* (HILGENDORF)

Nom. Jap. Ukigori

Very common; found near the shore within the bay and shores of adjacent waters at all times of the year.

Family Embiotocidae

37. *Ditrema temmincki* BLEEKER

Nom. Jap. Umi-tanago

Rather common; found within the bay and the shores of adjacent waters at all times of the year; collected by means of trinal nets, drag nets, etc.

Family Tetraodontidae

38. *Fugu poecilonotus* (TEMMINCK & SCHLEGEL)

Nom. Jap. Komon-fugu

Rare; collected within the bay in spring by means of drag nets.

Family Scorpaenidae

39. *Sebastes taczanowskii* (STEINDACHNER)

Nom. Jap. Ezo-mebaru (Gaya)

Very common; one of the typical shore fish in the bay and of the adjacent waters, the principal species for those angling at all times of the year; many specimens were collected by means of trinal nets, drag nets, etc.

40. *Sebastes schlegelii* HILGENDORF

Nom. Jap. Kuro-soi

Common; found in the bay and adjacent waters at all times of the year; collected by means of trinal nets and by angling.

41. *Sebastes vulpes* STEINDACHNER & DÖDERLEIN

Nom. Jap. Kitsune-mebaru

Rather rare; collected by means of trinal nets within the bay in summer.

42. *Sebastes pachycephalus pachycephalus* (TEMMINCK & SCHLEGEL)

Nom. Jap. Mura-soi

Rather common; found within the bay and in adjacent waters at all times of the year; collected by means of trinal nets, etc.

43. *Sebastes pachycephalus chalcogrammus* MATSUBARA

Nom. Jap. Akabuchi-murasoi

Rare; collected within the bay in summer by means of trinal nets.

44. *Sebastes trivittatus* HILGENDORF

Nom. Jap. Shima-soi

Rare; collected within the bay in summer by means of trinal nets.

45. *Sebastes nivosus* HILGENDORF

Nom. Jap. Goma-soi

Rather rare; collected at the mouth of the bay in summer and autumn by means of trinal nets.

Family Hexagrammidae

46. *Pleurogrammus azonus* JORDAN & METZ

Nom. Jap. Hokke

Very common; one of the important species for the fishery industry on the coasts of these waters.

47. *Hexagrammos otakii* JORDAN & STARKS

Nom. Jap. Ainame (Aburako)

Very common; one of the typical shore fish within the bay and in adjacent

waters; the principal species for shore angling at all times of the year; many specimens were collected by means of trinal nets, etc.

Family Cottidae

48. *Ceratocottus diceraus namiyei* JORDAN & STARKS

Nom. Jap. Oni-kajika

Rather common; found at the deep off the bay and adjacent waters at all times of the year; mainly caught by means of trinal nets and flat fish gill nets.

49. *Myoxocephalus stelleri raninus* JORDAN & STARKS

Nom. Jap. Gisu-kajika (Local name: Nabe-kowashi)

Very common; found on the shores within the bay and of the adjacent waters at all times of the year; collected by means of trinal nets, etc.

50. *Gymnocanthus herzensteini* JORDAN & STARKS

Nom. Jap. Tsumaguro-kajika (Local name: Gisu-kajika)

Very common; caught off this waters by means of flat fish gill nets at all times of the year.

51. *Gymnocanthus ventralis* (CUVIER & VALENCIENNES)

Nom. Jap. Ai-kajika

Rather common; collected within the bay and off these waters by means of trinal nets and flat fish gill nets, etc.

52. *Alcichthys alcicornis* (HERZENSTEIN)

Nom. Jap. Niji-kajika

Rather common; collected in the bay in spring, by means of trinal nets.

53. *Pseudoblennius cottoides* (RICHARDSON)

Nom. Jap. Asahi-ana-haze

Rather common; found in the inner part within the bay.

54. *Bero elegans* (STEINDACHNER)

Nom. Jap. Bero

Common; collected on the shores within the bay and of the adjacent waters at all times of the year by means of trinal nets and drag nets, etc.

55. *Blepsias cirrhosus draciscus* JORDAN & STARKS

Nom. Jap. Isoba-tengu (Local name: Sachiko)

Common; found at the so-called "Mo-ba" within the bay and in adjacent waters; collected at all times of the year by means of trinal nets and drag nets etc.

56. *Hemitripterus villosus* (PALLAS)

Nom. Jap. Kemushi-kajika (Local name: Tōbetsu-kajika)

Common; caught in the deep off these waters by means of flat fish gill nets, etc., some specimens were found within the bay in winter and collected by means of trinal nets.

Family Agonidae

57. *Pallasina eryngia* JORDAN & RICHARDSON

Nom. Jap. Higenaga-yagi-uwo

Rare; young were collected on the inner coast within the bay in spring.

58. *Podothecus sachi* (JORDAN & SNYDER)

Nom. Jap. Tokubire

Common; found within the bay and on the shores of adjacent waters in spring (April and May); many specimens were obtained by means of trinal nets.

Family Triglidæ

59. *Lepidotrigla microptera* GÜNTHER

Nom. Jap. Kanagashira

Rather common; found in the deep off these waters from spring to summer; collected by means of flat fish gill nets.

Family Cyclopteridae

60. *Aptocyclus ventricosus* (PALLAS)

Nom. Jap. Hotei-uwo

Rather common; collected within the bay and in adjacent waters in winter by means of trinal nets.

Family Liparidae

61. *Liparis takashimensis* NOJIMA

Nom. Jap. Takashima-kusa-uwo

Rare; collected in the inner part within the bay in autumn by means of drag nets.

62. *Liparis agassizii* PUTNAM

Nom. Jap. Ezo-kusa-uwo

Rather rare; collected from the Hokke-Ma near the bay in spring.

Family Bothidae

63. *Paralichthys olivaceus* (TEMMINCK & SCHLEGEL)

Nom. Jap. Hirame

Common; one of the important species in these waters; mainly caught by

means of flat fish gill nets.

Family **Pleuronectidae**

64. *Hippoglossoides dubius* (SCHMIDT)

Nom. Jap. Aka-garei

Common; one of the important species in these waters; mainly collected by means of flat fish gill nets from the deep off the bay and in adjacent waters.

65. *Cleisthenes herzensteini* (SCHMIDT)

Nom. Jap. Sō-hachi

Common; one of the important species in these waters; mainly collected off bay and from adjacent waters by means of flat fish gill nets.

66. *Eopsetta grigorjewi* (HERZENSTEIN)

Nom. Jap. Mushi-garei

Common; rather important species in these waters; mainly collected off the bay and from adjacent waters by means of flat fish gill nets.

67. *Lepidopsetta mochigarei* SNYDER

Nom. Jap. Asaba-garei

Common; rather important species in these waters; mainly collected off the bay and from adjacent waters by means of flat fish gill nets.

68. *Limanda punctatissima* (STEINDACHNER)

Nom. Jap. Suna-garei

Very common; found within the bay and in adjacent waters; caught at all times of the year by means of flat fish gill nets, trinal nets, drag nets and by angling.

69. *Limanda herzensteini* JORDAN & SNYDER

Nom. Jap. Ma-garei

Common; one of the important species in these waters; caught by means of flat fish gill nets, trinal nets and by angling.

70. *Limanda schrenki* SCHMIDT

Nom. Jap. Kurogashira-garei

Very common; found within the bay at all times of the year caught by means of flat fish gill nets, trinal nets and by angling.

71. *Limanda yokohamae* (GÜNTHER)

Nom. Jap. Mako-garei

Rather rare; collected within the bay from spring to summer by means of trinal nets.

72. *Platichthys stellatus* (PALLAS)

Nom. Jap. Numa-garei

Rather common; collected off shores in these waters in winter by means of flat fish gill nets.

73. *Glyptocephalus stelleri* (SCHMIDT)

Nom. Jap. Hireguro (Local name: Nameta)

Common; rather important species in these waters; caught from winter to spring by means of flat fish gill nets and trinal nets.

Family Gadidae

74. *Theragra chalcogramma* (PALLAS)

Nom. Jap. Suketō-dara

Very common; one of the important species in these waters; mainly caught off shore in winter.

Family Lophiidae

75. *Lophius litulon* (JORDAN)

Nom. Jap. Ki-ankō

Common; found in the deep off these waters; collected with flat fish by means of flat fish gill nets and trinal nets.

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