HOKKAIDO UNIVERSITY

Title	樺太産淡水魚目録
Author(s)	佐藤, 信一
Citation	札幌博物学会会報, 17(2), 102-112
Issue Date	1942-03-31
Doc URL	https://hdl.handle.net/2115/64310
Type	journal article
File Information	Vol.17No.2_005.pdf

Hokkaido University Collection of Scholarly and Academic Papers : HUSCAP

A Check List of the Fresh Water Fishes of Saghalien Island

By

Shin-ichi SATO
(佐藤信一)

The following list of fresh water fishes of Saghalien was compiled from the published literature available in Japan and Soviet Russia, with the addition of a few species newly recorded by the writer. For each species treated, the scientific name as used by the original author is given, together with the year of publication and the page of his paper. The locality where the species was obtained is given as usual, but in case of unexact locality only the word "Saghalien" is used. The precise description of the species new to the fauna will be given in near feature, as the through study of fishes of this area is going on.

The author wishes to express here his particular obligation to Dr. T. INUKAI, Hokkaido Imperial University, under whose suggestion this work has been done, and he is also indebted to Mr. S. NOJIMA for his kindness in giving the advantage to use his library.

Family **Petromyzontidae**

1 ***Lampetra japonica*** (MARTENS)

1a ****Lampetra japonica japonica*** (MARTENS)

1b ***Lampetra japonica kessleri*** (ANIKIN)

Lampetra fluviatilis japonica: BERG, 1923, p. 25 (ex-parte).

Lampetra japonica kessleri: BERG, 1931, p. 102. Saghalien: BERG, 1932, p. 33. Saghalien: HOLLY, 1933, p. 27. Saghalien (from BERG).

---

1) Contribution No. 165 from the Zoological Institute, Faculty of Science, Hokkaido Imperial University, Sapporo.

*) Single young specimen, measurring 192 mm in total length, and two ammocoetus were collected from Tarandomari River (X, 1939).

---

2 ***Lampetra reissneri*** (DYBOWSKI)

Lampetra mitsukurii: TANAKA, 1908, p. 235. South Saghalien; Tretiya padj.

Lampetra reissneri: BERG, 1932, p. 33. Saghalien.

3 ***Lampetra*** sp.

Lampetra sp.: TARANETZ, 1937b, p. 10. North Soghalien; Tym River, Alexandrovsk River.

Family **Acipenseridae**

4 ***Huso dauricus*** SOLDATOV & LINDBERG

Huso dauricus: SOLDATOV & LINDBERG, 1930, p. 30. Tatar strait; fishing ground of Saghalien.

5 ***Acipenser medirostris*** AYRES

Acipenser mikadoi: SCHMIDT, 1904, p. 284. South Saghalien; mouth of Lytoga River.

Acipenser medirostris: SOLDATOV & LINDBERG, 1930, p. 32. Saghalien (specimen from SCHMIDT): BERG, 1932, p. 63. South Saghalien (from SCHMIDT): TARANETZ, 1937b, p. 58. Saghalien: BERG, 1932, p. 63. South Saghalien (from SCHMIDT).

Family **Salmonidae**

6 ***Oncorhynchus keta*** (WALBAUM)

Oncorhynchus lagocepharus: NIKOLSKY, 1889, p. 299. Saghalien.

Oncorhynchus keta: SCHMIDT, 1904, p. 276. South Saghalien; Poronai River: SOLDATOV & LINDBERG, 1930, p. 53, fiig. 8. North Saghalien; Saghalien Bay, Tym River: BERG, 1932, p. 111, Fig. 110. North Saghalien; Tym River.

7 ***Oncorhynchus gorbuscha*** (WALBAUM)

Oncorhynchus proteus: NIKOLSKY, 1889, p. 301. North Saghalien; Tym River.

Oncorhynchus gorbuscha: SCMIDT, 1904, p. 270. South Saghalien; Lytoga River, Aniwa Bay, Terpenja Bucht: TANAKA, 1908, p. 237. South Saghalien; Chipesani, Lake Busse: BERG, 1932, p. 117. Saghalien: TARANETZ, 1937b, p. 11. North Saghalien; Tym River, Poronai River, Agnevo River, Kitowsi River.

8 ***Oncorhynchus nerka*** (WALBAUM)

Oncorhynchus nerka: TARANETZ; 1937a, p. 63. Saghalien.

9 ***Oncorhynchus kisutsch*** (WALBAUM)

Oncorhynchus kisutsch: TARANETZ, 1937b, p. 17. North Saghalien; Tym River.

10 ***Oncorhynchus masou*** (BREVOORT)

?Salmo perri (non BREVOORT): TANAKA, 1908, p. 238. South Saghalien; Vladimirofka, Tretiya padj, Lake Chipesani.

Oncorhynchus milktschitsch: TANAKA, 1908, p. 237. South Saghalien; Lake Chipesani, Lososei Bay.

Oncorhynchus masou: BERG, 1932, p. 128. Saghalien: TARANETZ, 1937a, p. 63. Saghalien: TARANETZ, 1937b, p. 11. North Saghalien; Tym River, Poronai River, Alexandrovsk River, Agnevo River, Kitowsi River.

11 ***Salvelinus malma*** (WALBAUM)

Salvelinus malma: TANAKA, 1908, p. 237. South Saghalien; Lake Chipesani, Vladimirofka, Troitskoe, Susuya River, Tretiya padj, Lake Busse, Lososei Bay.

Salvelinus alpinus malma: BERG, 1909, p. 33. South Saghalien (specimen from TANAKA '08): BERG, 1923, p. 62. South Saghalien (specimen from TANAKA, ex-parte; excl. *S. kuntlscha*).

Salvelinus malma: OSHIMA, 1938, p. 1494. South Saghalien; Tarandomari River.

11a ***Salvelinus malma isp curiles*** (PALLAS)

Salvelinus malma morpha curiles: BERG, 1932, p. 193. Saghalien.

Salvelinus malma isp curiles: TARANETZ, 1937b, p. 14. North Saghalien; Tym River, Poronai River, Alexandrovsk River, Agnevo River, Kitowsi River.

11b ***Salvelinus malma krascheninnikovi*** TARANETZ

Salvelinus malma krascheninnikovi: TARANETZ, 1937b, p. 13. North Saghalien; Tym Kiver, Alexandrovsk River, Agnevo River, Kitowsi Riuer.

12 ***Salvelinus leucomaenis*** (PALLAS)

Salvelinus leucomaenis: NIKOLSKY, 1889, p. 298. Saghalien; Dujika, Poronai, Susui.

Salvelinus kundscha: SCHMIDT, 1904, p. 625. South Saghalien; Lytoga River, Maoka, Aniwa Bay.

Salvelinus leucomaenis: BERG, 1906, p. 398. Saghalien: BERG, 1932, p. 184. Saghalien (name only); TARANETZ, 1937b, p. 35, 37. North Saghalien; Tym River, Kitowsi River, Niivo, Dagi, Chaivo, Pitun: OSHIMA, 1938, p. 1494. South Saghalien; Tarandomari River.

13 ***Hucho perryi*** (BREVOORT)

Hucho orientalis: NIKOLSKY, 1889, p. 303. Saghalien.

Hucho blackistoni: SCHMIDT, 1904, p. 268. South Saghalien; Lytoga River, Lake Vavauto (Aniwa Bay): TANAKA, 1908, p. 238. South Saghalien; mouth of Susuya River: TARANETZ, 1937a, p. 65. North Saghalien; Tym River: TARANETZ, 1937b, p. 14. North Saghalien; Tym River: BERG, 1932, p. 178. Saghalien (collected by A. M. DERJAVIN).

Family **Coregonidae**

14 ***Coregonus ussuriensis*** BERG

Coregonus ussuriensis: SOLDATOV & LINDBERG, 1930, p. 56. North Saghalien; Baikal Bay: BERG, 1932, p. 220. North Saghalien; Baikal Bay: TARANETZ, 1937a, p. 67. Saghalien: MIYADI & ISHII, 1938a, p. 57. South Saghalien; Lake Raitisi.

Family **Osmeridae**

15 ***Osmerus dentex*** STEINDACHNER

Osmerus dentex: SCHMIDT, 1904, p. 278. South Saghalien; Korsakow: TANAKA, 1908, p. 238. South Saghalien; Susuya River, Pervaya Padj, Lososei Bay.

Osmerus eperlanus dentex: TARANETZ, 1937b, p. 14, 37. North Saghalien; Tym River, Alexandrovsk River.

16 ***Hypomesus olidus*** (PALLAS)

Mesopus olidus: SCHMIDT, 1904, p. 281. South Saghalien; Korsakow,

Protoja Arakuli (Aniwa Bay): TANAKA, 1908, p. 238. South Saghalien; Lake Chipesani, Susuya River, Pervaya Padj.

Hypomesus olidus: TARANETZ, 1937b, p. 17, 37. North Saghalien; Tym River, Alexandrovsk River.

16a ***Hypomesus olidus bergi*** TARANETZ

Hypomesus olidus bergi: TARANETZ, 1935, p. 85. North Saghalien; Tym River: TARANETZ, 1937b, p. 15. North Saghalien; Tym River.

17 ***Hypomesus japonicus*** (BREVOORT)

Family **Salangidae**

18 ***Salangichthys microdon*** (BREEKRR)

Salanx microdon: SCHMIDT, 1904, p. 283. North Saghalien; Alexandrovsk: TANAKA, 1908, p. 239. South Saghalien.

Salangichthys microdon: SOLDATOV & LINDBERG, 1930, p. 61. North Saghalien; Baikal Bay: TARANETZ, 1937a, p. 69. Saghalien.

Family **Cyprinidae**

19 ***Leuciscus hakuensis hakuensis*** (GÜNTHER)

Leuciscus hakuensis: TANAKA, 1908, p. 236. South Saghalien; Susuya River, Lososei Bay. Chipesani.

Tribolodon Hakuensis hakuensis: OKADA & IKEDA, 1938, p. 149. Saghalien (name only): IKEDA, 1938, p. 189. Saghalien (name only).

20 ***Leuciscus hakuensis ezoe*** OKADA & IKEDA

Tribolodon hakuensis ezoe: IKEDA, 1938, p. 189. Saghalien (name only).

21 ***Leuciscus taczanowskii*** STEINDACHNER

Leuciscus adele: SCHMIDT, 1904, p. 252. South Saghalien; Lytoga River, Korsakow.

Leuciscus taczanowskii: SCHMIDT, 1904, p. 256. South Saghalien; Korsakow.

Tribolodon taczanowskii: OKADA & IKEDA, 1938, p. 149. Saghalien (name only): IKEDA, 1938, p. 189. Saghalien (name only).

---

*Many specimens, measurring 154..110 mm in total length, were collected from Rakuma. (22, VIII, 1935).

22 ***Leuciscus brandti*** (DYBOWSKI)

Leuciscus sachalinensis: NIKOLSKY, 1889, p. 296. North Saghalien; Alexandrovsk.

Leuciscus brandti: BERG, 1932, p. 351. South Saghalien; Korsakovskii, Tunnaicha Bay. North Saghalien; Alexandrovsk: TARANETZ, 1937b, p. 17, 37. North Saghalien; Alexandrovsk River, Agnevo River, Tym River.

23 ***Leuciscus waleckii*** (DYBOWSKI)

Idus waleckii: BERG, 1905, p. 142, 148. North Saghalien (from BERG '09): BERG, 1909, p. 117. North Saghalien; Tym River.

Leuciscus waleckii: SOLDATOV & LINDBERG, 1930, p. 72. Saghalien; Tatar Strait: BERG, 1932, p. 351. North Saghalien; Tym River, Poronai River.

Leuciscus waleckii waleckii: TARANETZ, 1937a, p. 74. Saghalien.

Leuciscus waleckii: ISHII & MIYADI, 1939, p. 581. South Saghalien; Lake Taraika.

24 ***Phoxinus percnurus sachalinensis*** BERG

Leuciscus jouyi: TANAKA, 1908, p. 236. South Saghalien; Vladimirofka, Troitskoe, Susuya River.

Phoxinus percnurus sachalinensis: BERG, 1932, p. 358. South Saghalien; Arakuli River: TARANETZ, 1937b, p. 18, 48. North Saghalien; Tym River, Poronai River, Osoi River.

24a ***Phoxinus percnurus mantschuricus*** BERG

Phoxinus percnurus mantschuricus: TARANETZ, 1937, p. 75. Saghalien.

25 ***Rhodeus sericeus*** (PALLAS)

Rhodeus sericeus: BERG, 1932, p. 524. North Saghalien; Tym River (collected by A. M. DERJAVIN): TARANETZ, 1937b, p. 26. North Saghalien; Tym River.

26 ***Cyprinus carpio*** (L.)

Cyprinus carpio: SOLDATOV & LINDBERG. 1930, p. 76. North Saghalien; Saghalien Bay, Saghalien Strait.

27 ***Carassius auratus gibelio*** (BLOCH)

Carassius auratus gibelio: TARANETZ, 1937b, p. 19, 32. North Saghalien; Tym River, Poronai River.

Family **Gasterosteidae**

28 ***Gasterosteus aculeatus*** L.

Gasterosteus cataphractus: SCHMIDT, 1904, p. 211. South Saghalien; Korsakovskii, Maoka, Taraika. North Saghalien; Tym River.

Gasterosteus aculeatus: TANAKA, 1908, p. 239. South Saghalien; Susuya River, Lososei Bay: IKEDA, 1934, p. 142. South Saghalien; Sisuka, Sakaehama, Odomari, Maoka: TARANETZ, 1937b, p. 29, 34. North Saghalien; Tym River, Osoi River.

29 ***Pungitius pungitius*** (L.)

Gasterosteus pungitius: NIKOLSKY, 1889, p. 292. Saghalien; Tym River, Sisuka.

Pygosteus pungitius: BERG, 1907b, p. 451. Saghalien; Tym River, Poronai River.

Pungitius pungitius: IKEDA, 1934, p. 147. South Saghalien; Sisuka, Motodomari, Sakaehama, Toyohara, Maoka, Odomari: TARANETZ, 1937b, p. 29, 34. North Saghalien; Tym River, Osoi River.

30 ***Pungitius tymensis*** (NIKOLSKY)

Gasterosteus tymensis: NIKOLSKY, 1889, p. 293. North Saghalien; Tym River.

Pungitius tymensis: BERG, 1907, p. 452. North Saghalien; Tym River (Specimen from NIKOLSKY '89).

Pygosteus tymensis: TANAKA, 1908, p. 239. South Saghalien; Chipesani.

Pungitius tymensis: IKEDA, 1934, p. 149. South Saghalien; Motodomari, Konuma, Sakaehama: TARANETZ, 1937a, p. 29. North Saghalien; Tym River: TARANETZ, 1937b, p. 84. Saghalien.

31 ***Pungitius sinensis*** (GUICHENOT)

Pungitius sinensis: IKEDA, 1934, p. 150. South Saghalien; Chipesani, Sisuka, Sakaehama.

Pungitius pungitius sinensis: TARANETZ, 1937b, p. 29, 34, 37. North Saghalien; Tym River, Alexandrovsk River, Osoi River.

Family **Cobitidae**

32 ***Misgurnus anguillicaudatus*** (CANTOR)

Misgurnus fossilis anguillicaudatus: TARANETZ, 1937b, p. 26. North Saghalien; Poronai River.

33 ***Barbatula toni oreas*** (JORDAN & FOWLER)

Nemacheilus barbatulus toni: BERG, 1905, p. 66. (from BERG '09) Saghalien.

Orthrias oreas: TANAKA, 1908, p. 236. South Saghalien; Chipesani, Vladimirofka, Troitskoe.

Nemachilus barbatula toni: BERG, 1909, p. 165. South Saghalien; Arakuli River (Aniwa Bay): TARANETZ, 1937a, p. 81. Saghalien: TARANETZ, 1937b, p. 27, 34, 37. North Saghalien; Tym River, Agnevo River, Osoi River.

34 ***Cobitis taenia*** L.

Cobitis taenia: TARANETZ, 1937a, p. 81. Saghalien: TARANETZ, 1937b, p. 27. North Saghalien; Tym River.

Family **Esocidae**

35 ***Esox reicherti*** DYBOWSKI

Esox reicherti: SASAKI, 1924, p. 51. South Saghalien; Lake Taraika: TARANETZ, 1937a, p. 83. Saghalien: TARANETZ, 1937b, p. 27. North Saghalien; Tym River.

Family **Mugilidae**

36 ***Mugil cephalus*** L.

Mugil cephalus: TARANETZ, 1937a, p. 85. Saghalien; Japan sea north to Alexandrovsk.

Family **Cottidae**

37 ***Mesocottus haitej*** (DYBOWSKI)

Mesocottus haitej: TARANETZ, 1937a, p. 111. Saghalien.

38 ****Cottus nozawae*** SNYDER

39 ***Cottus amblystomopsis*** SCHMIDT

Cottus amblystomopsis: SCHMIDT, 1904, p. 89. South Saghalien; Lytoga River: GRATZIANOW, 1907, p. 659. Saghalien (from SCHMIDT):

*Single specimen, measuring 111 mm in total length, was collected by Mr. K. YAMAHIRA from Tokonpo River. (15, VII. 1940).

JORDAN, TANAKA & SNYDER, 1913, p. 265. Saghalien (from SCHMIDT): BERG, 1923, p. 405. Saghalien: TARANETZ, 1937b, p. 37. North Saghalien; Alexandrovsk River, Kitowsi River.

40 ***Myoxocephalus plathycephalus*** (PALLAS)

Porocottus ijimai: TANAKA, 1908, p. 244. South Saghalien; Mouth of Susuya River, off Chipesani.

Megarocottus plathycephalus: SOLDATOV & LINDBERG, 1930, p. 228. North Saghalien; Baikal Bay.

Myoxocephalus platycephalus: TARANETZ, 1937b, p. 28. North Saghalien; Tym River.

Family **Gobiidae**

41 ***Chaenogobius annularis annularis*** (GILL)

Chaenogobius annularis annularis: TOMIYAMA, 1936, p. 90. Saghalien.

Chloea castanea: TARANETZ, 1937a, p. 150. South Saghalien.

42 ***Chaenogobius annularis urotaenia*** (HILGENDORF)

Chloea aino: SCHMIDT, 1904, p. 207. South Saghalien; Arakuli River (Chipesani), Lake Tonnai.

Chaenogobius macrognathus: TANAKA, 1808, p. 251. South Saghalien; Chipesani, Lososei Bay.

Gymnogobius macrognathus: BERG, 1923, p. 391. South Saghalien (from SCHMIDT).

Chaenogobius annularis urotaenia: TOMIYAMA, 1936, p. 91. South Saghalien.

Gymnogobius macrognatus: TARANETZ, 1937b, p. 28. North Saghalien; Tym River.

Gymnogobius annularis urotaenia: MIYADI, 1940, p. 83, Fig. 112. South Saghalien; Lake Raitisi.

43 ***Glossogobius giuris brunneus*** (TEM. & SCHL.)

Glossogobius brunneus: TANAKA, 1908, p. 251. South Saghalien; Lake Chipesani.

Family **Pleuronectidae**

44 ***Platichthys stellatus*** (PALLAS)

Platichthys stellatus: TANAKA, 1908, p. 254. South Saghalien; Mouth

of Susuya River, Nayoro: TARANETZ, 1937b, p. 30, 34. North Saghalien; Tym River: SOLDATOV & LINDBERG, 1930, p. 409. North Saghalien; Baikal Bay.

Family **Gadidae**

45 ***Lota lota*** (L.)

Lota lota lota: TARANETZ, 1937a, p. 169. Saghalien.

Lota lota: TARANETZ, 1937b, p. 30. North Saghalien; Tym River: MIYADI & ISHII, 1939b, p. 1067. South Saghalien; Horonai River.

Several species of Salmonidae introduced are omitted in the above list.

Salmo irideus (GIBBONS)

South Saghalien; Tarandomari, introduced from Chitose, Hokkaido.

Salvelinus fontinalis (MITCHILL)

South Saghalien; Ichani, introduced from Kawakami, Hokkaido.

Zoological Institute, Faculty of Science,
Hokkaido Imperial University,
Sapporo, Nippon

Bibliography

(Publications with an asterisk are those inascessible to me)

BERG, L. S. 1905 Verzeichniss der Fische von Russich-Turkestan. Ann. Mus. Zool. St Peters., X, pp. 312–332.

_____ 1906 Uebersicht der Salmoniden von Amur-Becken. Zool. Anz., Bd. 30, pp. 393–398.

_____ 1907a A review of the cobitoid fishes of the basin of the Amur. Proc. U. S. Nat. Mus., Vol. 32, pp. 435–438.

_____ 1907b A review of the species of the tenspined Stickle-backs or Pygosteus from east Asia. Proc. U. S. Nat. Mus., Vol. 32, pp. 451–454.

_____ 1909 Ichthyologia Amurensis. Mem. Acad. Sci. St Peters., Vol. 24, No. 9, pp. VII, 1–270, 3 Pls.

_____ 1923 Les poison des Eaux Douces de la Russie. 1 Vol., pp. 1–535; 359 fig., 1 Pl. 2nd Ed.

_____ 1931 A review of the Lamprey of the Northern Hemisphere. Ann. Mus. Zool. Acad. Sci. USSR., Vol. 32, pp. 87–116.

_____ 1932 Les Poison des Eaux Douces de l'U.S.S.R. et des Pays Limitrophes. 3rd Ed., Pt. 1, pp. 1–543.

_____ 1937 Zoogeographical divisions for Fresh water fishes of the Pacific Slope of northern Asia. Proc. Fifth. Pac. Sci. Congr. Canada, Vol. V, pp. 3791–3793.

GRATZIANOW, V. 1907 Übersicht der Susswasser Cottides des Russischen Reiches. Zool. Anz., Vol. 31, pp. 654–660.

HOLLY, M. 1933 Cyclostmata. Das Tierreich Lief, 59, pp. XIV, 62.

IKEDA, K. 1933 Distribution of Gasterosteus and its variation. (Text in Japanese). Zool. Mag., Vol. 45, pp. 141–143.

IKEDA, H. 1938 Statistical observations on the species of the Genus Tribolodon in Japan and some notes on their distribution. Sci. Rep. Tokyo Bunrika Daigaku, No. 56, Vol. 3, pp. 163–192.

ISHII, S. & D. MIYADI 1939 Notes on Mokkiri, Leuciscus waleckii (Dyb.) from Lake Taraika. (Text in Japanese). Bot. & Zool., Vol. 7, No. 3, pp. 581–582.

JORDAN, D. S., TANAKA, S. & J. O. SNYDER 1913 A catalogue of the fishes of Japan. Jour. Coll. Sci. Tokyo Imp. Univ., Vol. 33, pp. 1–497.

MIYADI, D. & S. ISHII 1939a On the Ussurian White-fish Coregons ussuriensis BERG from Saghalien (Text in Japanese). Bot. & Zool., Vol. 7, No. 1, pp. 57–59.

_____ 1939b On Lota lota from Saghalien. (Text in Japanee). Bot. & Zool., Vol. 7, No. 6, p. 69.

MIYADI, D. 1940 Fresh water fishes from Manchuko. (Text in Japanese). Kantosiu oyobi Mansiukoku Rikusui-Seibutu Tiosa-Sio, pp. 22–88.

*NIKOLSKY, A. M. 1889 Saghalien and its fauna of Vertebrate. (Text in Russian).

MORI, T. 1936 Studies on the geographical distribution of fresh water fishes in eastern Asia. pp. 1–88.

OKADA, Y. & H. IKEDA 1938 Contribution to the study of the fresh water fiish fauna of Hokkaido, Japan. Sci. Rep. Tokyo Bunrika Daigaku, Vol. 3, pp. 133–162.

SASAKI, M. 1924 On Pike from Sakhalin and Lucius reicheti (DYBOWSKY). Trans. Sapporo Nat. Hist. Soc, IX, Pt. 1, pp. 51–58, fig. 1–2.

SCHMIDT, P. 1904 Pisces Marium Orientalium Imperii Rossici. pp. XL, 466, 6 Pls., 31 Text-figs.

SOLDATOV, V. K. & G. J. LINDBERG 1930 A review of the sea of the Far East. Bull. Pac. Sci. Fish. Inst., Vol. 5, No. 5, pp. XXII, 576, fig. 76.

TANAKA, S. 1908 Notes on a collection of fishes made by Prof. IJIMA in the southern part of Sakhalin. Anno. Zool. Japo., Vol. 6, pp. 235–254.

TARANETZ, A. V. 1935 On some fishes from Saghalien. Bull. Far. East. Acad. Sci. USSR., Vol. 15, p. 85–88.

_____ 1937a Handbook for identification of fishes of Soviet far east and adjacent waters. Bull. Pac. Sci. Inst. Fish. & Ocean., Vol. 11, pp. 1–200.

_____ 1937b Material on the study of ichthyo fauna of Soviet Saghalien. Bull. Pacl. Sci. Inst. Fish. & Ocean., Vol. 12, pp. 5–50.

TOMIYAMA, I. 1936 Gobiidae of Japan. Jap. Jour. Zool., Vol. 7, No. 1, pp. 37–112.