

Additional Records of Boreal Species of Fishes in the Southern Piscifaunal Area of Japan, with Special Reference to the Emergences of the Sablefish and Greenland Halibut in Sagami Bay during the First Half of 1966*

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Repeated experimental deep-water line fishing in Sagami Bay in the first half of 1966** and frequent visits to several fishing villages on the coasts of Suruga Bay and Sagami Bay since 1964 have resulted in the procurement and find of the following boreal fishes: *Anoplopoma fimbria* (PALLAS), *Pleurogrammus azonus* JORDAN & METZ and *Reinhardtius hippoglossoides* (WALBAUM). The first-named species is recorded here for the first time in the southern piscifaunal area of Japan†. The occurrence of the second-named species in Suruga Bay is an interesting addition to the knowledge of the fauna of this bay. Three specimens of the last-named species caught in the first half of 1966 in Sagami Bay remind the writer of the coldwater year of 1963. The present writer expresses here his sincere thanks to the crew of the "Sakafuji-maru" of Odawara City for their tireless cooperation, and Mr. Kiichi MORI, Director, and Mr. Kei-ichi ŌNISHI of the Itō Branch, Shizuoka Prefectural Fisheries Experiment Station, Itō City, for their kindness and generosity in permitting the writer to report upon a specimen of the Greenland halibut and another fine specimen of *Pleurogrammus azonus* caught in Sagami Bay in 1966 and 1963, respectively. Acknowledgement is made here of the partial financial support of this study through a grant from the Japanese Society for the Promotion of Science as part of the Japan-U.S. Cooperative Science Program.

Anoplopoma fimbria (PALLAS) of the family
Anoplopomidae or Anoplopomatidae

English name: sablefish; black cod; coalfish

Japanese name: gin-dara; namiara

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** A coldwater mass seems to have persisted near some of the islands lying south of Sagami Bay and in the south-western part of this bay during the first half of 1966, and in the northernmost part of the southern piscifaunal area of Japan along the Pacific coasts.

† Defined by Dr. Shigeho Tanaka in 1931.

Study material.—1 specimen (Cat. No. Abe '66-382); mature female measuring 700 mm. in total length, caught by deep-water long line on May 6, 1966, at a depth of about 650 m., about 1.5 miles SSE of Hatsushima Island off Atami. In all 6 individuals of this species were caught along with squaloid sharks and 45 kg. of *Sebastes* spp. from the same fishing ground (after the crew of the "Sakafuji-maru").

1 specimen (Cat. No. ABE '66-1434); mature male measuring 710 mm. in total length, caught by deep-water long line on June 22, 1966, at a depth of about 650 m., about 6 or 7 miles off Atami (north of Hatsushima). Only this specimen and specimens of *Sebastes matsubarae* (HILGENDORF) were caught there.

Notes on the specimens.—In both specimens D₁.XIX, D₂.17; A.17. In the latter specimen P.16 (left) & 17 (right); V.15 (left & right); gill-rakers on the first arch i+5+1+16 (left) & ii+5+16 (right); branchiostegals 6 (left & right). In the former specimen gill-rakers on the first arch i+5+1+15 (right); number of pyloric caeca 6 (all fairly long); many nematodes of the genus *Anisakis** were seen on the outside of the stomach.

Pleurogrammus azonus JORDAN & METZ of the family Hexagrammidae

English name: close ally of atkafish

Japanese name: hokke

Study material.—1 specimen measuring ca. 330 mm. was seen at Shishihama, Numazu City, on December 17, 1964. It was caught by trawl in Suruga Bay on that day. Not preserved.

1 specimen measuring ca. 400 mm. in total length; taken by trap net off Kawana, Itō City, in March or April, 1963.

Reinhardtius hippoglossoides (WALBAUM) of the family Pleuronectidae

English name: Greenland halibut

Japanese name: Karasu-garei; ezo-karasu-garei

Study material.—1 specimen (Cat. No. ABE '66-1431), measuring 450 mm. in total length, caught by deep-water long line on May 11, 1966, at a depth of 760 m., 2 or 3 miles east of Iwa (near Manazuru).

1 specimen (Cat. No. ABE '66-1433), measuring 480 mm. in total length, caught by deep-water long line on June 19, 1966, at a depth of 760 m., about 2 miles south of Ōiso (near Enoshima).

1 specimen preserved at Itō Branch, Shizuoka Prefectural Fisheries Experiment Station; caught by trap net off Futo, Itō City, in June, 1966. It measures 630 mm. in

* Identified by Dr. Ryō KAMEGAYA.

total length.

Notes on the specimens.—The counts given below are arranged in the order of the specimens listed above. The counts of the third specimen have been taken by Mr. K. ŌNISHI. D. 103, 92 (there is a gap in one place), 97; A. 75, 71, 71; P. 13 (on both sides), 14 (on both sides), 13 (on one side); gill-rakers 4+13 (left) & 3+11 (right), 3+12 (left) & 1+3+12 (right), not counted.

In view of the remarkable variability in the meristic characters in the members of the genus *Reinhardtius* (cf. HUBBS & WILIMOWSKY, 1964), the present writer regards now the Japanese form as conspecific with the Atlantic one.

References

Readers are requested to see the publications listed below, or in the "References" of the following papers:

- ABE, Tokiharu. 1963. Unusual occurrences of several species of boreal, amphipacific and bathypelagic fishes in Sagami Bay and adjoining waters during the first half of 1963, a coldwater year in southern Japan. Bull. Tokai Reg. Fish. Res. Lab., no. 37, pp. 27-35.
- HIKITA, Toyoji. 1951. List of fishes taken by trawl in the waters of Hokkaido. Itōsokoushigenchōsa Gaihō, no. 1, pp. 52-59. In Japanese. Mimeograph. *Reinhardtius hippoglossoides* (WALBAUM) is recorded from Monbetsu, Hokkaido, with the Japanese name "ezokara^ニsugarei".
- HUBBS, Carl L. & Norman J. WILIMOWSKY., 1964. Distribution and synonymy in the Pacific Ocean, and variation, of the Greenland halibut, *Reinhardtius hippoglossoides* (WALBAUM). J. Fish. Res. Bd. Canada, xxi (5), pp. 1129-1154, figs. 1 & 2.
- MIKAWA, Masao. 1963. Ecology of the lesser halibut, *Reinhardtius hippoglossoides matsuurae*. Bull. Tohoku Reg. Fisher. Res. Lab., no. 23, pp. 1-43. In Japanese, with summary in English.
- NAKAI, Jinjiro, et al., 1964. Preliminary report on marine biological anomalies on the Pacific coast of Japan in early months of 1963, with reference to oceanographic conditions. Bull. Tokai Reg. Fish. Lab., no. 38, pp. 57-75.

北方系魚類の南日本に於ける出現の追加記録, 特に 1966 年前半相模湾に
出現したギンダラとカラスガレイに就いて

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抄 録

1963 年 (昭和 39 年) 前半の異常冷水期に北方系の魚類が相模湾とその近くに出現した事に就いてはさきに報告したが, その後 1964 年 12 月に駿河湾でホッケが 1 尾漁獲されたのを見, また 1963 年 3 月か 4 月に伊東市川奈の定置網で獲れたホッケの標品を見る事が出来た。

1966 年 (昭和 41 年) 前半も冷水が伊豆七島からその近くに亙つて停滞し, その為か南日本 (犬吠岬以南) で始めてギンダラが 5 月 6 日と 6 月 22 日に 1 尾ずつ, 初島沖の深度 650 m で延縄にかかった。5 月 11 日には岩の沖合で, 6 月 19 日には大磯の沖合でそれぞれ 1 尾 (ともに深度 760 m で) 延縄でカラスガレイが獲れ, また 6 月中に伊東市富戸の定置網にこのカレイが 1 尾入った。これらは 1966 年前半の伊豆付近冷水塊の停滞に伴う多くの異常現象の, ほんの一部であろうと思われるふしがある。