

Fishes of the Boso Peninsula, Central Japan—I

Coastal Fishes Taken by Set Net off Ainohama, Tateyama

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Abstract Fishes taken by set-net off the southernmost part of the Boso Peninsula (Ainohama, Tateyama, Chiba Prefecture), central Japan, were collected or recorded during April–November 1992. A total of 32 surveys yielded 133 species, representing 72 families and 111 genera. Of these, 92 species (69%) have their distribution centers located in southern Japan (south of the peninsula), whereas the remaining 41 species (31%) were relatively wide-ranging, extending the length of Japan. The predominance of the former, together with the absence of more northern species whose distribution centers are located north of the peninsula, are characteristics of the zoogeography of the region, which is influenced by the northward flowing Kuroshio current.

Key words: Ichthyofauna, Kuroshio, Boso Peninsula.

Boso Peninsula is located about midway along the length of Japan, protruding southward from the Pacific coast of Honshu Island. The peninsula forms the northwest boundary of Tokyo Bay and borders the Pacific Ocean along its northeast coast. To the north, the Tone River approximates the base of the peninsula. Tokyo Bay, a typically shallow, inner water basin with a muddy bottom, is presently reclaimed along its coastline, but many tidal flats occurred at the river mouths before the 1950's. The mouth of the bay opens to the Pacific Ocean through the Uraga Strait, through which the oceanic environment intrudes slightly. On the Pacific Ocean side of the peninsula, a narrow continental shelf is followed by a steep continental slope with complex bottom topography, including submarine ridges, rises, valleys and troughs of various sizes. Off the slope, sea depths in excess of several thousand meters occur. In contrast, the inland area of the peninsula is relatively flat, being of largely hilly terrain, with a few mountains reaching 300 m above sea-level. Except for the Tone River, there are no major rivers.

The peninsula is greatly affected by the

warm Kuroshio current, which originates in the equatorial Pacific. It flows northward along the Pacific coast of southern Japan as far as the east coast of the peninsula, where its direction changes eastward. Consequently, the Boso Peninsula, particularly at its tip, is noticeably warmer than adjacent areas, both oceanographically and climatologically, this being evidenced by the occasional occurrence of the tropical and subtropical organisms (e.g., Numata and Ohno, 1985). Although the cold Oyashio current does not usually extend to the peninsula, its effect can be recognized in the occurrence of certain boreal zooplankton (Omori, 1967), as well as in the physical properties of the deep offshore waters (Yang *et al.*, 1993a, b).

Despite its wide variety of habitats and unique geographic characteristics, faunal studies of the peninsula (including fish studies) have been restricted to scattered observations or those based on unpublished reports (e.g., Numata and Ohno, 1985). In his preliminary compilation of fishes from Chiba Prefecture (which includes the Boso Peninsula), Kawana (1988) listed as many as 792 species, by their Japanese names. However,

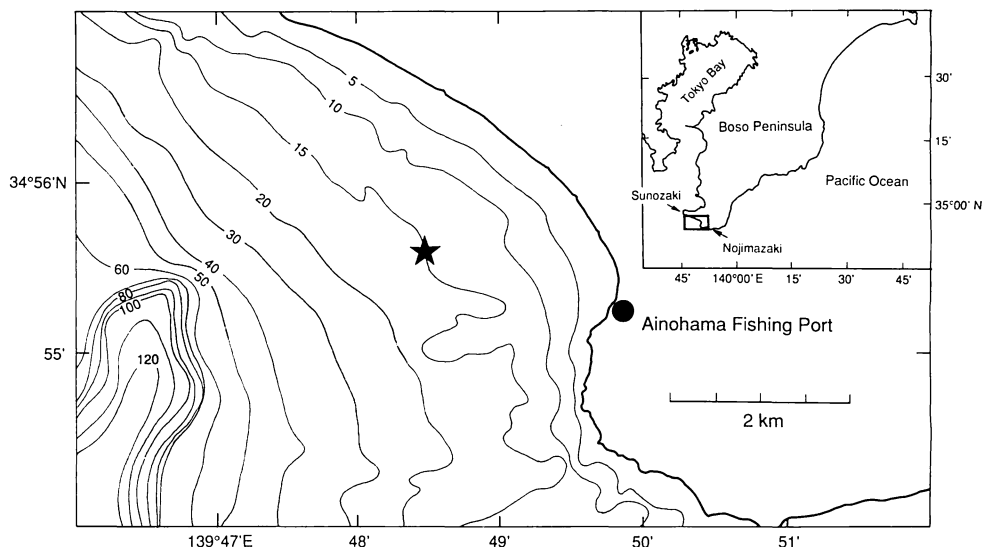


Fig. 1. Locations of Ainohama and the set net. Depth contour in meters.

his data were based mostly on early papers lacking voucher specimens, or unpublished reports that lack credibility in species identification, except for the ichthyofaunal list of Tateyama and adjacent regions published by Hayashi and Ito (1974).

This paper provides a list of coastal fishes that were collected or recorded from 32 surveys of set-net catches off Ainohama, Tateyama, Chiba Prefecture, between April and November 1992, and briefly discusses zoogeographic characteristics of the area.

Materials and Methods

Ainohama is located at the tip of Boso Peninsula, central Japan, about midway between the Nojima and Sunozaki points (Fig. 1). The set net was situated about 2 km northwest of Ainohama fishing port (34°55' N, 139°50' E; Fig. 1) at a depth of about 15 m on a predominantly sandy bottom.

Fishes were collected from the set-net catches while the latter were sorted into the commercially important species by local fishermen. One to 7 surveys were made each month between April and November 1992, resulting in 32 surveys overall. Well-known or commercially important species that are not apt to be misidentified were recorded, but not collected. Since the purpose of the survey was primarily to qualitatively assess the ichthyofauna, no quantitative data

were recorded.

All fishes collected were deposited at the Natural History Museum and Institute, Chiba (CBM). In the list of fishes below, species' names, which follow Masuda *et al.* (1984), are followed by their Japanese names and distribution patterns in Japanese waters, designated by N, S and W in parentheses. N and S denote those species whose distribution centers are located in northern and southern Japan (north and south of the peninsula), respectively. W denotes species occurring the length of Japan. Information on distribution patterns was taken from Masuda *et al.* (1984). The fishes are listed by families in phylogenetic sequence (Nelson, 1984) and alphabetically within families by genus and species. A museum number is given for each lot, followed by the number of specimens, and the size range in parentheses (total length [TL] in sharks and eels, disk length [DL] in rays and standard length [SL] in other fishes; all in millimeters) and date of collection (all in 1993). Fishes recorded, but not collected, were designated with asterisks before the species' name. Since the present survey was aimed at listing as many species as possible, a paucity of collection data does not infer an uncommon species.

List of Fishes

- Class Chondrichthyes
 Subclass Elasmobranchii
 Order Lamniformes
 Family Carcharhinidae
1. *Triakis scyllia* Müller et Henle: dochi-zame (W)
 CBM-ZF 2698 (1, 388 mm TL), Apr. 27
- Order Rajiformes
 Family Rhinobatidae
2. *Platyrrhina sinensis* (Schneider): uchi-wazame (S)
 CBM-ZF 2844 (1, 268 mm TL), June 25
- Family Dasyatidae
3. *Dasyatis akajei* (Müller et Henle): aka-ei (S)
 CBM-ZF 2670 (1, 147 mm DL), Apr. 21;
 2841 (1, 212), June 20
 4. *Urolophus aurantiacus* Müller et Henle: hirata-ei (S)
 CBM-ZF 2699 (1, 243 mm DL), Apr. 27;
 2822 (1, 160), June 12
- Family Myliobatidae
5. *Myliobatis tobijei* Bleeker: tobi-ei (S)
 CBM-ZF 2994 (1, 143 mm DL), Sept. 18;
 2995 (1, 163), Sept. 18
- Class Osteichthyes
 Order Elopiformes
 Family Albulidae
6. *Albula vulpes* (Linnaeus): soto-iwashi (S)
 CBM-ZF 3001 (1, 422 mm SL), Sept. 29
- Order Anguilliformes
 Family Muraenidae
7. *Gymnothorax kidako* (Temminck et Schlegel): utsubo (S)
 CBM-ZF 2823 (1, 405 mm TL), June 12
- Family Ophichthidae
8. *Ophisurus macrorhynchus* Bleeker: dai-nan-umihebi (S)
 CBM-ZF 2673 (1, 643 mm TL), Apr. 21;
 2679 (1, 630), Apr. 21
- Family Congridae
9. *Conger japonicus* Bleeker: kuro-anago

(S)
 CBM-ZF 2658 (1, 652 mm TL), Apr. 21;
 2754 (1, 596), May 20

Order Clupeiformes

Family Clupeidae

10. *Etrumeus teres* (DeKay): urume-iwashi (S)
 CBM-ZF 2654 (1, 165 mm SL), Apr. 21
11. *Sardinops melanostictus* (Temminck et Schlegel): ma-iwashi (W)
 CBM-ZF 2651 (1, 168 mm SL), Apr. 21;
 2682 (3, 81–144), Apr. 21
12. *Spratelloides gracilis* (Temminck et Schlegel): kibinago (S)
 CBM-ZF 2692 (1, 79 mm SL), Apr. 27;
 2708 (1, 84), Apr. 27

Family Engraulidae

13. *Engraulis japonicus* (Temminck et Schlegel): katakuchi-iwashi (W)
 CBM-ZF 2652 (1, 133 mm SL), Apr. 21;
 2681 (1, 116), Apr. 21; 2769 (1, 128),
 June 3

Order Siluriformes

Family Plotosidae

14. *Plotosus lineatus* (Thunberg): gonzui (S)
 CBM-ZF 2845 (1, 198 mm SL), June 25;
 2974 (1, 162), Sept. 12

Order Aulopiformes

Family Synodontidae

15. *Saurida undosquamis* (Richardson): ma-eso (S)
 CBM-ZF 2958 (1, 247 mm SL), Aug. 5
16. *Trachinocephalus myops* (Forster): oki-eso (S)
 CBM-ZF 2824 (1, 312 mm SL), June 12

Order Gadiformes

Family Moridae

17. *Physiculus japonicus* Hilgendorf: chigo-dara (S)
 CBM-ZF 2764 (1, 132 mm SL), June 3

Order Cyprinodontiformes

Family Exocoetidae

18. *Cypselurus heterurus doederleini* (Steindachner): tsukushi-tobi-uo (W)
 CBM-ZF 2814 (1, 283 mm SL), June 11;

- 2818 (1, 246), June 11
19. *Cypselurus poecilopterus* (Valenciennes): aya-tobi-uo (S)
CBM-ZF 2992 (1, 203 mm SL), Sept. 18
 20. *Euleptorhamphus viridis* (van Hasselt): tō-zayori (S)
CBM-ZF 2924 (1, 315 mm SL), July 15
 21. *Hyporhamphus sajori* (Temminck et Schlegel): sayori (W)
CBM-ZF 3174 (1, 201 mm SL), Oct. 15
- Family Belonidae
22. *Tylosurus crocodilus crocodilus* (Le Sueur): okizayori (S)
CBM-ZF 3002 (1, 407 mm SL), Sept. 29;
3176 (1, 451), Oct. 15
- Family Scomberesocidae
23. *Cololabis saira* (Brevoort): sanma (W)
CBM-ZF 2697 (1, 183 mm SL), Apr. 27;
2707 (3, 122–140), Apr. 27
- Order Beryciformes
Family Monocentridae
24. *Monocentris japonica* (Houttuyn): matsukasa-uo (S)
CBM-ZF 2693 (1, 94 mm SL), Apr. 27;
2710 (2, 112–123), Apr. 27; 2932 (1, 117), July 17
- Family Trachichthyidae
25. *Paratrachichthys sajademalensis* Kotlyar: minami-haridashiebisu (S)
CBM-ZF 2763 (1, 72 mm SL), June 3;
2768 (6, 61–78), June 3
- Family Holocentridae
26. *Sargocentron ittodai* (Jordan et Fowler): teri-ebisu (S)
CBM-ZF 2952 (1, 142 mm SL), July 31
- Order Zeiformes
Family Zeidae
27. **Zeus faber* Linnaeus: matōai (S)
June 17, 20
- Order Syngnathiformes
Family Fistulariidae
28. **Fistularia commersonii* Rüppel: aka-yagara (S)
Sept. 18, 21; Oct. 20, 29
 29. *Fistularia petimba* Lacepède: ao-yagara (S)
CBM-ZF 2957 (1, 121 mm SL), Aug. 5
- Family Syngnathidae
30. *Hippocampus takakurae* Tanaka: takakuratatsu (S)
CBM-ZF 2970 (1, 107 mm SL), Sept. 12
- Order Scorpaeniformes
Family Scorpaenidae
31. *Sebastes inermis* Cuvier: mebaru (W)
CBM-ZF 2715 (1, 45 mm SL), Apr. 30;
2721 (2, 45–45), Apr. 30; 2927 (1, 172), July 15
- Family Triglidae
32. **Chelidonichthys spinosus* (McClelland): hōbō (W)
July 15; Aug. 5
- Family Platycephalidae
33. **Platycephalus indicus* (Linnaeus): kochi (S)
July 23, 28; Aug. 5
 34. *Suggrundus meerdervoorti* (Bleeker): megochi (S)
CBM-ZF 2696 (1, 193 mm SL), Apr. 27
- Family Cottidae
35. *Pseudoblennius cottoides* (Richardson): asahi-anahaze (W)
CBM-ZF 2669 (1, 70 mm SL), Apr. 21;
2724 (1, 75), May 13
 36. *Pseudoblennius percoides* Günther: anahaze (S)
CBM-ZF 2668 (1, 75 mm SL), Apr. 21;
2684 (3, 61–125), Apr. 21; 2723 (1, 78), May 13
 37. *Pseudoblennius zonostigma* Jordan et Starks: obi-anahaze (S)
CBM-ZF 2840 (1, 88 mm SL), June 20;
2877 (1, 89), July 2; 2955 (1, 88), Aug. 5
- Order Perciformes
Family Percichthyidae
38. **Lateolabrax japonicus* (Cuvier): suzuki (W)
Apr. 30; June 3, 11, 20
 39. **Lateolabrax latus* Katayama: hira-suzuki (S)
May 13

- Family Serranidae
 40. *Epinephelus fasciatus* (Forsskål): aka-hata (S)
 CBM-ZF 2938 (1, 191 mm SL), July 23
- Family Teraponidae
 41. *Rhyncopelates oxyrhynchus* (Temminck et Schlegel): shimaisaki (S)
 CBM-ZF 2876 (1, 159 mm SL), July 2; 2928 (1, 153), July 15
 42. *Terapon jarbua* (Forsskål): kotohiki (S)
 CBM-ZF 2893 (1, 181 mm SL), July 10
- Family Priacanthidae
 43. *Cookeolus boops* (Schneider): chikame-kintoki (S)
 CBM-ZF 2847 (1, 196 mm SL), June 25
 44. *Priacanthus macracanthus* Cuvier: kin-tokidai (S)
 Sept. 15, 18; Nov. 25
- Family Apogonidae
 45. *Apogon niger* Döderlein: kuro-ishi-mochi (S)
 CBM-ZF 3199 (1, 97 mm SL), Oct. 29
 46. *Apogon semilineatus* Temminck et Schlegel: nenbutsudai (S)
 CBM-ZF 2665 (1, 90 mm SL), Apr. 21; 2683 (2, 53–78), Apr. 21
- Family Sillaginidae
 47. *Sillago japonica* Temminck et Schlegel: shiro-gisu (W)
 CBM-ZF 2849 (1, 164 mm SL), June 25; 2943 (1, 151), July 23
- Family Labracoglossidae
 48. *Labracoglossa argentiventris* (Lacépède): takabe (S)
 CBM-ZF 2660 (1, 152 mm SL), Apr. 21; 2678 (1, 123), Apr. 21; 2931 (1, 165), July 17
- Family Pomatomidae
 49. *Scombrops boops* (Houttuyn): mutsu (W)
 CBM-ZF 2690 (1, 84 mm SL), Apr. 27; 2706 (2, 61–96), Apr. 27
- Family Echeneidae
 50. *Echeneis naucrates* Linnaeus: kobanzame (S)
- CBM-ZF 3198 (1, 307 mm SL), Oct. 20
- Family Carangidae
 51. **Alectis ciliaris* (Bloch): itohiki-aji (S)
 Oct. 10, 15
 52. *Caranx sexfasciatus* (Quoy et Gaimard): gingame-aji (S)
 CBM-ZF 2997 (1, 110 mm SL), Sept. 21; 3016 (3, 114–137), Oct. 7
 53. *Decapterus akaadsi* Abe: aka-aji (S)
 CBM-ZF 2940 (1, 94 mm SL), July 23
 54. *Decapterus macrosoma* Bleeker: moro (S)
 CBM-ZF 2898 (3, 123–135 mm SL), July 10
 55. *Decapterus maruadsi* (Temminck et Schlegel): maru-aji (S)
 CBM-ZF 2653 (1, 168 mm SL), Apr. 21; 2675 (3, 128–151), Apr. 21
 56. *Decapterus muroadsi* (Temminck et Schlegel): muro-aji (S)
 CBM-ZF 2655 (1, 194 mm SL), Apr. 21; 2701 (1, 200), Apr. 27; 2725 (1, 272), May 13; 2830 (1, 237), June 17
 57. *Decapterus tabl* Berry: oaka-muro (S)
 CBM-ZF 2939 (1, 183 mm SL), July 23; 2945 (3, 170–175 mm SL), July 23
 58. *Kaiwarinus equula* (Temminck et Schlegel): kaiwari (S)
 CBM-ZF 2657 (1, 49 mm SL), Apr. 21; 3175 (1, 162), Oct. 15
 59. *Pseudocaranx dentex* (Bloch et Schneider): shima-aji (W)
 CBM-ZF 2687 (1, 88 mm SL), Apr. 27; 2720 (1, 104), Apr. 30
 60. *Selar crumenophthalmus* (Bloch): me-aji (S)
 CBM-ZF 2846 (1, 96 mm SL), June 25; 2976 (1, 166), Sept. 12; 2977 (1, 168), Sept. 12
 61. *Seriola dumerili* (Risso): kanpachi (S)
 CBM-ZF 2714 (1, 89 mm SL), Apr. 30; 2829 (1, 227), June 17
 62. **Seriola lalandi* Valenciennes: hiramasu (W)
 June 3
 63. *Seriola quinqueradiata* Temminck et Schlegel: buri (W)
 CBM-ZF 2762 (1, 78 mm SL), June 3; 2828 (1, 145), June 17
 64. *Trachurus japonicus* (Temminck et Schlegel): ma-aji (W)

- CBM-ZF 2656 (1, 125 mm SL), Apr. 21;
2674 (1, 53), Apr. 21
- Family Coryphaenidae
65. **Coryphaena hippurus* Linnaeus: shiira (S)
Sept. 15
- Family Menidae
66. *Mene maculata* (Bloch et Schneider): ginkagami (S)
CBM-ZF 2896 (1, 38 mm SL), July 10
- Family Emmelichthyidae
67. *Erythrocles schlegelii* (Richardson): ha-chibiki (S)
CBM-ZF 2756 (1, 137 mm SL), May 20;
2760 (1, 129), May 20
- Family Lutjanidae
68. *Lutjanus vitta* (Quoy et Gaimard): yoko-suji-fuedai (S)
CBM-ZF 2984 (1, 257 mm SL), Sept. 15
- Family Gerreidae
69. *Gerres oyena* (Forsskål): kurosagi (S)
CBM-ZF 2894 (1, 142 mm SL), July 10
- Family Haemulidae
70. *Parapristipoma trilineatum* (Thunberg): isaki (S)
CBM-ZF 2688 (1, 91 mm SL), Apr. 27;
2705 (2, 91–114), Apr. 27
- Family Sparidae
71. **Acanthopagrus schlegelii* (Bleeker): kurodai (W)
Apr. 21; Sept. 12
72. *Evynnis japonica* Tanaka: chidai (W)
CBM-ZF 2650 (1, 167 mm SL), Apr. 21;
2831 (3, 76–80), June 17; 2954 (1, 101), Aug. 5
73. *Pagrus major* (Temminck et Schlegel): madai (W)
CBM-ZF 2755 (1, 145 mm SL), May 20;
2850 (1, 193), June 25
- Family Lethrinidae
74. *Lethrinus nematacanthus* Bleeker: ito-fuefuki (S)
CBM-ZF 2662 (1, 183 mm SL), Apr. 21;
2677 (1, 180), Apr. 21; 2942 (1, 179), July 23
- Family Sciaenidae
75. **Nibea mitsukurii* (Jordan et Snyder): nibe (W)
June 11
- Family Mullidae
76. *Upeneus tragula* Richardson: yome-himeji (S)
CBM-ZF 2953 (1, 173 mm SL), Aug. 5;
2959 (2, 184–200), Aug. 5
- Family Pempheridae
77. *Parapriacanthus ransonneti* Steindachner: kinmemodoki (S)
CBM-ZF 2664 (1, 64 mm SL), Apr. 21;
2993 (1, 61), Sept. 18
78. *Pempheris xanthoptera* Tominaga: minami-hatanpo (S)
CBM-ZF 2839 (1, 106 mm SL), June 20;
2842 (2, 101–107), June 20; 2971 (1, 86), Sept. 12; 2983 (1, 81), Sept. 12
- Family Kyphosidae
79. *Girella punctata* Gray: mejina (W)
CBM-ZF 2717 (1, 39 mm SL), Apr. 30;
2719 (1, 31), Apr. 30
80. *Kyphosus lembus* (Cuvier): isuzumi (S)
CBM-ZF 2975 (1, 115 mm SL), Sept. 12
81. *Microcanthus strigatus* (Cuvier): kagokakidai (S)
CBM-ZF 2686 (1, 101 mm SL), Apr. 27;
2930 (1, 105), July 17
- Family Chaetodontidae
82. **Chaetodon auripes* Jordan et Snyder: chôchô-uo (S)
Oct. 15
- Family Oplegnathidae
83. *Oplegnathus fasciatus* (Temminck et Schlegel): ishidai (W)
CBM-ZF 2661 (1, 157 mm SL), Apr. 21;
2676 (1, 124), Apr. 21; 2843 (1, 29), June 20; 2996 (1, 147), Sept. 21
84. *Oplegnathus punctatus* (Temminck et Schlegel): ishigakidai (S)
CBM-ZF 2925 (1, 48 mm SL), July 15;
2929 (1, 54), July 15

Family Embiotocidae

85. **Ditrema temmincki* Bleeker: umitanago (W)
June 25
86. *Neoditrema ransonneti* Steindachner: okitanago (S)
CBM-ZF 2659 (1, 135 mm SL), Apr. 21;
2702 (2, 137–139), Apr. 27; 2897 (1, 69),
July 10

Family Pomacentridae

87. *Abudefduf vaigiensis* (Quoy et Gaimard): oyabiccha (S)
CBM-ZF 2968 (1, 72 mm SL), Sept. 12;
2981 (6, 60–78), Sept. 12

Family Cirrhitidae

88. *Cirrhitichthys aureus* (Temminck et Schlegel): okigonbe (S)
CBM-ZF 3014 (1, 89 mm SL), Oct. 7

Family Cheilodactylidae

89. *Goniistius zebra* (Döderlein): migimaki (S)
CBM-ZF 2716 (1, 53 mm SL), Apr. 30;
2722 (1, 46), Apr. 30
90. *Goniistius zonatus* (Cuvier): takanohadai (S)
CBM-ZF 2689 (1, 195 mm SL), Apr. 27;
2703 (1, 194), Apr. 27

Family Mugilidae

91. **Liza carinata carinata* (Günther): sesuji-bora (W)
Oct. 15

Family Sphyraenidae

92. *Sphyraena japonica* Cuvier: yamatokamasu (S)
CBM-ZF 2757 (1, 112 mm SL), May 20;
2761 (2, 78–106), May 20; 2765 (1, 86),
June 3
93. *Sphyraena pinguis* Günther: aka-kamasu (S)
CBM-ZF 2813 (1, 267 mm SL), June 11;
2817 (1, 254), June 11

Family Polynemidae

94. *Polydactylus plebejus* (Broussonet): tsu-bame-konoshiro (S)
CBM-ZF 3015 (1, 143 mm SL), Oct. 7

Family Labridae

95. *Halichoeres poecilopterus* (Temminck et Schlegel): kyûsen (S)
CBM-ZF 2972 (1, 172 mm SL), Sept. 12

Family Scaridae

96. **Calotomus japonicus* (Valenciennes): budai (S)
Apr. 21

Family Blenniidae

97. *Petroscirtes breviceps* (Valenciennes): nijigino (S)
CBM-ZF 3173 (1, 68 mm SL), Oct. 15;
3177 (1, 65), Oct. 15

Family Callionymidae

98. **Repomucenus richardsonii* (Bleeker): nezumi-gochi (W)
Oct. 29

Family Acanthuridae

99. *Prionurus scalprus* Valenciennes: nizadai (W)
CBM-ZF 2695 (1, 204 mm SL), Apr. 27
100. *Zanclus cornutus* (Linnaeus): tsunodashi (S)
CBM-ZF 2967 (1, 70 mm SL), Sept. 12;
2980 (9, 54–65), Sept. 12

Family Siganidae

101. *Siganus canaliculatus* (Park): shimofuri-aigo (S)
CBM-ZF 2711 (1, 258 mm SL), Apr. 30
102. *Siganus fuscescens* (Houttuyn): aigo (W)
CBM-ZF 2685 (1, 278 mm SL), Apr. 27;
2709 (1, 238), Apr. 27

Family Scombridae

103. *Auxis thazard* (Lacepède): hirasôda (S)
CBM-ZF 2964 (1, 281 mm SL), Sept. 12
104. *Auxis rochei* (Risso): marusôda (S)
CBM-ZF 2965 (1, 243 mm SL), Sept. 12
105. *Euthynnus affinis* (Cantor): suma (S)
CBM-ZF 2966 (1, 286 mm SL), Sept. 12;
2979 (2, 271–282), Sept. 12
106. *Sarda orientalis* (Temminck et Schlegel): hagatsuo (S)
CBM-ZF 2933 (1, 194 mm SL), July 17
107. *Scomber australasicus* Cuvier: gomasaba (W)

- CBM-ZF 2691 (1, 93 mm SL), Apr. 27;
2718 (2, 80–89), Apr. 30
108. **Scomber japonicus* Houlttuyn: masaba (W)
Sept. 12, 15; Oct. 10
109. **Scomberomorus niphonius* (Cuvier): sawara (S)
Sept. 18
110. **Thunnus thynnus* (Linnaeus): kuro-maguro (W)
Sept. 15
- Family Nomeidae
111. *Nomeus gronovii* (Gmelin): eboshidai (S)
CBM-ZF 2816 (1, 60 mm SL), June 11
112. *Psenes cyanophrys* Valenciennes: suji-hanabira-uo (S)
CBM-ZF 2825 (1, 48 mm SL), June 12
- Order Pleuronectiformes
- Family Bothidae
113. **Paralichthys olivaceus* (Temminck et Schlegel): hirame (W)
Apr. 27; June 3, 25; Sept. 12, 18
114. **Pseudorhombus pentophthalmus* Günther: tama-ganzōbirame (W)
June 17
115. *Tarphops oligolepis* (Bleeker): arame-garei (W)
CBM-ZF 2969 (1, 47 mm SL), Sept. 12
- Family Cynoglossidae
116. *Paraplagusia japonica* (Temminck et Schlegel): kuro-ushinoshita (W)
CBM-ZF 2827 (1, 312 mm SL), June 17; 2941 (1, 262), July 23
- Family Soleidae
117. *Heteromycteris japonica* (Temminck et Schlegel): sasa-ushinoshita (S)
CBM-ZF 2848 (1, 64 mm SL), June 25
- Order Tetraodontiformes
- Family Balistidae
118. **Aluterus monoceros* (Linnaeus): usubahagi (S)
June 11, 20; July 2, 15
119. *Aluterus scriptus* (Osbeck): sōshihagi (S)
CBM-ZF 2815 (1, 64 mm SL), June 11; 2926 (1, 116), July 15
120. *Brachaluteres ulvarum* Jordan et Snyder: aosahagi (S)
CBM-ZF 2895 (1, 51 mm SL), July 10
121. *Stephanolepis cirrhifer* (Temminck et Schlegel): kawahagi (W)
CBM-ZF 2671 (1, 133 mm SL), Apr. 21; 2672 (1, 136), Apr. 21; 2680 (2, 104–111), Apr. 21
122. *Thamnaconus modestus* (Günther): uma-zurahagi (W)
CBM-ZF 2663 (1, 214 mm SL), Apr. 21; 2956 (1, 144), Aug. 5
- Family Ostraciidae
123. *Lactoria diaphana* (Bloch et Schneider): umisuzume (S)
CBM-ZF 2758 (1, 117 mm SL), May 20
124. *Ostracion immaculatus* Temminck et Schlegel: hakofugu (W)
CBM-ZF 2826 (1, 102 mm SL), June 17; 2978 (1, 103), Sept. 12
125. *Tetrosomus concatenatus* (Bloch et Schneider): hamafugu (S)
CBM-ZF 2759 (1, 144 mm SL), May 20
- Family Tetraodontidae
126. *Arothron firmamentum* (Temminck et Schlegel): hoshifugu (S)
CBM-ZF 3179 (1, 125 mm SL), Oct. 20
127. *Canthigaster rivulata* (Temminck et Schlegel): kitamakura (S)
CBM-ZF 2700 (1, 83 mm SL), Apr. 27; 2704 (3, 62–91), Apr. 27
128. *Lagocephalus spadiceus* Abe, Tabeta et Kitahama: shiro-sabafugu (W)
CBM-ZF 2667 (1, 163 mm SL), Apr. 21
129. *Takifugu chrysops* (Hilgendorf): akamefugu (S)
CBM-ZF 2851 (1, 218 mm SL), June 25; 2944 (1, 103), July 23
130. *Takifugu exascurus* (Jordan et Snyder): mushifugu (W)
CBM-ZF 2712 (1, 112 mm SL), Apr. 30; 2767 (1, 146), June 3
131. *Takifugu pardalis* (Temminck et Schlegel): higanfugu (W)
CBM-ZF 2666 (1, 115 mm SL), Apr. 21
132. *Takifugu vermicularis* (Temminck et Schlegel): shosaifugu (W)
CBM-ZF 2713 (1, 146 mm SL), Apr. 30; 2973 (1, 138), Sept. 12; 2982 (2, 139–144), Sept. 12

Family Diodontidae

133. **Diodon holocanthus* Linnaeus: harisen-
bon (S)
Sept. 18

Discussion

A total of 133 species of fishes representing 72 families and 111 genera were recognized in the set-net catches off Ainoama. Undoubtedly, more species remain to be collected, because the present study covered only eight months and was limited in the number of surveys. Also, it was evident that the set net selectively caught coastal pelagic species rather than benthic, more oceanic or deep-sea, and more inshore fishes, such as small gobies. Therefore additional sampling methods should be employed in order to assess more completely the ichthyofaunal composition of the area.

Hayashi and Ito's (1974) list of 184 species from the southern parts of Tateyama Bay, an adjacent area north of Ainoama, included fishes taken by various means from different habitats, as well as those observed by diving. Of those 184 species, 62 were recorded during the present study. Conversely, 71 species recorded in this study were not listed by Hayashi and Ito (1974). In all, resulting in a total of 255 species is now recognized from the two areas, a number which may well represent the coastal ichthyofauna of the region.

Noticeable differences between the two studies are found in the species composition of several families. Fishes found exclusively in rocky areas or tide pools, such as species of Scorpaenidae, Chaetodontidae, Pomacentridae and Gobiidae, are mostly recorded in Hayashi and Ito (1974), whereas those living in the pelagic zone, such as species of Carangidae and Scombridae, are mostly recorded in the present study. This can be ascribed to the different sampling methods employed.

Of the 133 species recognized in the present study, 69% (92 spp.) have their distribution centers located south of the peninsula, whereas the remaining 31% (41 spp.) were relatively wide-ranging, extending the length of Japan. In addition, no species were recorded, whose distribution centers are located north of the peninsula. The predomi-

nance of the more southern species over those more wide-ranging, together with the absence of northern species, are the zoogeographic characteristics of this region, apparently resulting from the influence of the Kuroshio current flowing northward along the peninsula (for similar patterns of occurrence of the southern species, see Horikoshi [1957, 1990] for molluscan fauna). This is further supported by the fact that the southern species were mainly collected during June–October, when the surface water temperature had risen notably, allowing movement of the southern species to the coastal waters of the peninsula.

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房総半島産の魚類—I

館山市相浜沖合の定置網の漁獲物 から収集された魚類

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1992年4月から11月の計32回にわたって、館山市相浜沖合の定置網の漁獲物にみられた魚類を調査した結果、72科111属からなる133種の魚類が確認された。これらのうちの92種(69%)は、分布の中心を南日本(房総半島より南)にもつ南方種であり、また、残りの40種(31%)は、南北日本に広く分布する広域種であった。一方、分布の中心を北日本(房総半島より北)にもつ北方種は、今回の調査ではまったくみられなかった。このように、南方種の卓越と北方種の欠如が本海域の魚類相の特徴であり、これは半島の沖合を北に向かって流れる黒潮の影響が大きいためと考えられた。