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The Reef Fish Fauna of Kuchierabu, Offshore Island of Southern Japan

Kenji GUSHIMA and Yutaka MURAKAMI

Department of Fisheries, Faculty of Fisheries and Animal Husbandry, Hiroshima University, Fukuyama

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(Fig. 1)

There is not yet any information on the reef fish of Kuchierabu Island. The present investigation of the ichthyofauna of Kuchierabu was undertaken in order to provide a partial description of the zoogeographical character of Kuchierabu. A study of this kind is important, since Kuchierabu lies between southern Japan with its subtropical fauna and the Ryukyu Islands with their tropical fauna.[1),2)] It also lies in the path of the branch of the warm ocean current Kuroshio that flows northeast along the Pacific coast of the Ryukyu Islands and southern Japan.

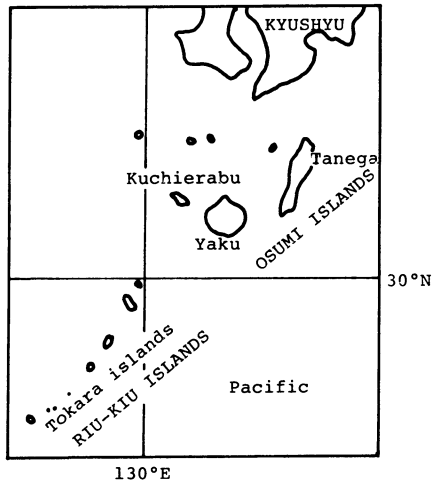

Fig. 1. Chart of Kuchierabu Island and adjacent regions.

The fishes were collected on the reef in Kuchierabu Island from October 1970 till November 1973 that is in February, April, August, and October of 1971; February, April, August, and November of 1972; and February, April, May, August, and November of 1973. The fishes were taken by spear, hook, and gill net, their species names were identified,[1)~33)] and their standard lengths were measured.

A total of 217 species living in Kuchierabu Island were recorded. Among them eight species (marked by•) were observed under water but not collected. lected.

The list is given below. It shows the species name, standard length in millimeters, and specimens number.

Dussumieridae

°*Spratelloides japonicus* (HOUTTUYN), 77, 1

Synodontidae

Saurida gracilis (QUOY M GAIMARD), 155, 1

Plotosidae

Plotosus anguillaris LACÉPÈDE, 55–90, 3

Ophichthidae

Ophichthus cephalozona JORDAN et SNYDER, 740, 1

Muraenidae

°*Gymnothorax petelli* (BLEEKER), 520, 1

G. flavagineus BLOCH et SCHENIDER, 215, 1

G. flavimarginatus (RÜPPELL), 540, 1

G. eurostus (ABOTT), 270–480, 8

G. thyrsoideus (RICHARDSON), 240, 1

G. kidako (TEMMINCK et SCHLEGEL), 212–750, 3

G. undulatus (LACÉPÈDE), 820, 1

°*Echidna polyzona* (RICHARDSON), 181, 1

°*E. nebulosa* (AHL), 540–660, 2

Belonidae

Tylosurus giganteus (TEMMINCK et SCHLEGEL), 570, 1

T. melanotus (BLEEKER), 459, 1

Aulostomidae

Aulostomus chinensis (LINNÉ), 755–770, 2

Fistulariidae

Fistularia villosa KLUNZINGER, 650–780, 3

F. petimba LACÉPÈDE, 700, 1

Syngnathidae

Choeroichtys sculptus (GÜNTHER), 63, 1

Holocentridae

Myripristis murdjan (FORSKÅL), 100–260, 6

Adioryx diadema LACÉPÈDE, 135–172, 13

°*Holocentrus cornutus* BLEEKER, 195, 1

Atherinidae

Atherion elymus JORDAN et STARKS, 41–44, 2

Pranesus morrisi (JORDAN et STARKS), 126–128, 2

Mugilidae

Crenimugil crenilabis (FORSKÅL), 29–50, 8

Sphyraenidae

°*Sphyraena forsteri* CUVIER et VALENCIENNES, 283, 1

S. picuda BLOCH et SCHNEIDER, 403, 1

Carangidae

Caranx delicatissimus (DÖDERLEIN), 225, 1

Trachinotus baillonii (LACÉPÈDE), 140–258, 2

Seriola purpurascens TEMMINCK et SCHLEGEL, 390, 1

Elagatis bipinnulata (QUOY et GAIMARD), 314, 1

Oplegnathidae

°°°*Oplegnathus fasciatus* (TEMMINCK et SCHLEGEL), 354, 1

°°*O. punctatus* (TEMMINCK et SCHLETEL), 229–335, 2

Pempheridae

Pempheris japonicus DÖDERLEIN, 112–126, 2

P. umbrus (SNYDER), 150–165, 2

Mullidae

Parupeneus spilurus (BLEEKER), 54–280, 17

P. indicus (SHAW), 63–265, 9

P. barberinus (LACÉPÈDE), 87, 1

°*P. bifasciatus* (LACÉPÈDE), 41, 1

P. trifasciatus (LACÉPÈDE), 70–290, 22

Apogonidae

Apogon endekataenia BLEEKER, 38, 1

A. aroubiensis (HOMBRON et JACQUINOT), 100, 1

A. doederleini JORDAN et SNYDER, 76–95, 27

A. notatus (HOUTTUYN), 75–78, 2

°*Cheilodipterus macrodon* (LACÉPÈDE), 135–172, 5

Priacanthidae

Priacanthus hamrur (FORSKÅL), 426, 1

Kuhliidae

Kuhlia taeniura (CUVIER et VALENCIENNES), 75–99, 3

Serranidae

Plectropomus maculatus (BLOCH), 201–296, 2

Valiola flavimarginata (RÜPPELL), 150, 1

V. louti (FORSKÅL), 290–343, 2

Cephalopholis miniatus (FORSKÅL), 270, 1

C. leopardus SCHULTZ et MARSHALL, 147–190, 2

C. pachycentron (VALENCIENNES), 168, 1

C. argus SCHNEIDER, 94–219, 2

Epinephelus merra BLOCH, 83–212, 8

E. tauvina (FORSKÅL), 222–227, 2

E. maculatus (BLOCH), 178, 1

°*E. corallicola* (CUVIER et VALENCIENNES), 177–224, 2

E. caeruleopunctatus (BLOCH), 142–157, 2

E. fasciatus (FORSKÅL), 104–260, 6
Grammistes sexlineatus (THUNBERG), 127–134, 2
Pogonoperca ocellata GÜNTHER, 155, 1

Plesiopidae

°*Plesiops oxycephalus okinawaensis* AOYAGI, 95, 1

Pseudochromidae

Dampieria spiloptera BLEEKER, 98–136, 12

Girellidae

°°*Girrela melanichthys* (RICHARDSON), 162–343, 10
°°*G. mezina* JORDAN et STARKS, 133–160, 2

Kyphosidae

Kyphosus lembus (CUVIER et VALENCIENNES), 186–285, 3
K. cinerascens (FORSKÅL), 161–324, 3

Lethrinidae

Lethrinus nematacanthus BLEEKER, 147–180, 3
L. haematopterus TEMMINCK et SCHLEGEL, 217, 1
L. choerorhynchus (SCHNEIDER), 141–438, 2

Lutjanidae

Lutjanus rivulatus (CUVIER et VALENCIENNES), 150, 1
L. fulviflamma (FORSKÅL), 126, 1
L. russeli (BLEEKER), 93–95, 2
L. monostigma (CUVIER et VALENCINNES), 133–256, 3
L. spilurus (BENNETT), 113–204, 4
L. gibbus (FORSKÅL), 68–195, 5
L. kasmira (FORSKÅL), 147–180, 7

Pomadasyidae

Plectorhynchus orientalis (BLOCH), 323–362, 2
P. diagrammus (LINNÉ), 169–265, 8
P. flavomaculatus (CUVIER), 162–305, 5
°*Scolopsis cancellatus* CUVIER et VALENCIENNES, 94, 1

Cirrhitidae

°*Cirrhitichthys aprinus* (CUVIER), 221, 1

Aplodactylidae

°°*Goniistius zonatus* (CUVIER et VALENCIENNES), 92–302, 8
°°*G. zebra* (DÖDERLEIN), 135–203, 4

Parapercidae

°*Parapercis polyophthalma* (CUVIER et VALENCIENNES), 165, 1

Blenniidae

°*Negoscartes sinuosus* (SNYDER), 48, 1
°°*Meiacanthus kamoharai* TOMIYAMA, 50, 1

°°*Istiblennius margaritarius* (SNYDER), 72, 1
I. edentulus (BLOCH et SCHNEIDER), 115, 1
°°*I. luctuosus* (WHITLEY), 38, 1

Brotulidae

Brotula multibarbata TEMMINCK et SCHLEGEL, 290–320, 2

Eleotridae

Eviota abax (JORDAN et SNYDER), 23–32, 3

Gobiidae

Zonogobius semidoliatus (CUVIER et VALENCIENNES), 27, 1
Quisquilius naraharai (SNYDER), 35, 1
Bathygobius fuscus (RÜPPELL), 39, 2
°*Amblygobius semicinctus* (BENNETT), 72, 1

Pomacentridae

Amphiprion xanthurus CUVIER et VALENCIENNES, 92, 1
Chromis isharai (SCHMIDT), 118–137, 6
Dascyllus trimaculatus (RÜPPELL), 103, 1
Eupomacentrus jenkinsi (JORDAN et EVERMAN), 88–154, 31
Pomacentrus coelestis JORDAN et STARKS, 35–58, 7
P. dorsalis GILL, 57–63, 6
°*P. flavicauda* WHITLEY, 61–70, 6
Abudefduf leucozonus (BLEEKER), 39–86, 4
A. notatus (DAY), 47, 2
A. sordidus (FORSKÅL), 36–133, 9
A. vaigiensis (QUOY et GAIMARD), 61–145, 31
A. coelestius (CUVIER et VALENCIENNES), 45–138, 15
°*Glyphidodontops assimilis* (GÜNTHER), 28–49, 7
G. leucopomus (LESSON), 34–35, 5
°*G. uniocellata* (QUOY et GAIMARD), 47, 1
G. glauca (CUVIER et VALENCIENNES), 55–62, 2
Paraglyphidodon xanthurus (BLEEKER), 110–133, 35

Labridae

Bodianus diana (LACÉPÈDE), 160, 1
Anampses caeruleopunctatus RÜPPELL, 81–285, 3
A. geographicus (CUVIER et VALENCIENNES), 60–100, 6
Cheilio inermis (FORSKÅL), 270–380, 4
•*Gomphosus varius* LACÉPÈDE, about 50–80
Thalassoma hardwicke (BENNETT), 41–67, 3
T. lunare (LINNÉ), 121, 1
T. lutescens (LAY et BENNETT), 134–212, 14
T. fuscum (LACÉPÈDE), 145, 1

T. cupido (TEMMINCK et SCHLEGEL), 24–132, 41
°°*Pseudolabrus japonicus* (HOUTTUYN), 88–170, 7
•*Labroides dimidiatus* (CUVIER et VALENCIENNES), about 50–70
Stethojulis interrupta (BLEEKER), 28–115, 22
S. trilineata (BLOCH et SCHENIDER), 93–100, 2
S. strigiventer (BENNETT), 65–96, 5
S. bandanensis (BLEEKER), 30–70, 15
Macropharyngodon meleagris (CUVIER et VALENCIENNES), 52–66, 5
Halichoeres trimaculatus (QUOY et GAIMARD), 86–87, 2
H. scapularis (BENNETT), 56, 1
H. centriquadrus (LACÉPÈDE), 44–50, 3
H. margaritaceus (CUVIER et VALENCIENNES), 33–94, 7
Coris aygula LACÉPÈDE, 61–360, 3
C. gaimardi (QUOY et GAIMARD), 145–270, 2
C. variegata (RÜPPELL), 155, 1
Hologymnosus semidiscus (LACÉPÈDE), 110–277, 6
Iniistius dea (TEMMINCK et SCHLEGEL), 168–170, 2
°*Hemipteronotus pentadactylus* (LINNAEUS), 147, 1
•° *Novaculichthys taeniurus* (LACÉPÈDE), about 130

Scaridae

°*Scarops rubroviolaceus* (BLEEKER), 363–440, 2
Ypsiscarus ovifrons (TEMMINCK et SCHLEGEL), 313–375, 3
•°*Y. oedema* (SNYDER), about 300–400
°*Scarus gibbus* RÜPPELL, 437, 1
°*S. venosus* CUVIER et VALENCIENNES, 142–294, 12
S. lunula (SNYDER), 127–267, 5
°*S. sordidus* FORSKÅL, 38–69, 4
°*S. capistratoides* BLEEKER, 298, 1
•*S. chlorodon* JENYNS, about 400
S. lepidus JENYNS, 120–287, 4
°*S. fasciatus* CUVIER et VALENCIENNES, 267–332, 4
S. ghobban FORSKÅL, 66–75, 4
°*S. oviceps* CUVIER et VALENCIENNES, 289–359, 4
°*S. rhoduropterus* (BLEEKER), 277, 1
S. sp. (Native name: Shiromohame), 145–285, 3
Calotomus japonicus (CUVIER et VALENCIENNES), 92–380, 41

Platacidae

Platax pinnatus (LINNÉ), 30–230, 4

Scorpididae

Microcanthus strigatus (CUVIER et VALENCIENNES), 75–134, 4

Chaetodontidae

Pomacanthus imperator (BLOCH), 153, 1
P. semicirculatus (CUVIER et VALENCIENNES), 66–192, 6
Holacanthus trimaculatus LACÉPÈDE, 134–170, 2
•*Forcipiger longirostris* (BRONSSONET), about 10
Chaetodon auriga FORSKÅL, 77–117, 3
C. lineolatus (CUVIER et VALENCIENNES), 230, 1
C. vagabundus LINNÉ, 81, 1
C. citrinellus CUVIER et VALENCIENNES, 106, 1
C. lunula (LACÉPÈDE), 85, 1
•*C. argentatus* SMITH et RADCLIFF, about 50
C. collaris BLOCH, 38–144, 13
•*C. ephippium* CUVIER et VALENCIENNES, about 70
C. kleini BLOCH, 55, 1

Zanclidae

Zanclus cornutus (LINNÉ), 83–167, 6

Acanthuridae

Acanthurus glaucopareius CUVIER, 93–95, 2
A. pyroferus KITTLITZ, 145, 1
A. triostegus (LINNÉ), 40–140, 6
A. lineatus (LINNÉ), 63–65, 2
A. olivaceus BLOCH et SCHNEIDER, 187–254, 10
°*A. bariene* LESSON, 59–293, 33
A. lineolatus CUVIER et VALENCIENNES, 52–177, 21
°*A. bleekeri* GÜNTHER, 215–373, 3
Zebrasoma veliferum (BLOCH), 242–249, 2
Z. scopas (BENNETT), 104–157, 6
Ctenochaetus strigosus (BENNETT), 52–67, 2
Callicanthus hexacanthus (BLEEKER), 380, 1
C. lituratus (BLOCH et SCHNEIDER), 138–182, 2
Naso unicornis (FORSKÅL), 77–468, 15
N. brevirostris (CUVIER et VALENCIENNES), 405, 1
°*N. thynnoides* (CUVIER et VALENCIENNES), 270, 1
Prionurus microlepidotus LACÉPÈDE, 72–389, 39

Siganidae

°*Siganus virgatus* (CUVIER et VALENCIENNES), 259, 1
S. spinus (LINNÉ), 125–182, 4
°*S. rostratus* (CUVIER et VALENCIENNES), 259–262, 2

Balistidae

Balistes vidua SOLANDER, 103–148, 2

B. conspicillum BLOCH et SCHNEIDER, 207–280, 5
B. chrysopterus BLOCH et SCHNEIDER, 156, 1
Odonus erythrodon (GÜNTHER), 240, 1

Aluteridae

Pervagor melanocephalus (BLEEKER), 85, 1
Amanses pardalis (RÜPPELL), 214, 1
A. sanwichiensis (QUOY et GAIMARD), 187–305, 2
A. howensis (OGILBY), 197, 1
Aluterus monoceros (LINNÉ), 413, 1

Triodontidae

Triodon bursarius REINWARDT, 267, 1

Ostraciontidae

Ostracion tuberculatus LINNÉ, 162–186, 2
O. meleagris SHAW, 189–196, 2
Lactoria corunutus (LINNÉ), 211, 1
L. fornasini (BIANCONI), 110, 1

Tetradontidae

°°*Canthigaster rivulatus* (TEMMINCK et SCHLEGEL), 52–122, 6

Diodontidae

Diodon hystrix LINNÉ, 203–280, 2

Scorpaenidae

°*Scorpaena albo-brunnea* GÜNTHER, 58–91, 2
Scorpaenopsis cirrhosa (THUNBERG), 107–177, 5
Pterois volitans (LINNÉ), 115–204, 2
Dendrochirus zebra (QUOY et GAIMARD), 142–165, 3

Synaceiidae

°*Synanceia verrucosa* BLOCH et SCHNEIDER, 260, 1

Bothidae

°*Bothus pantherinus* (RÜPPELL), 205, 1

Soleidae

Synaptura orientalis (BLOCH et SCHNEIDER), 220, 1

From a detailed study of the zoogeographical positions of the fishes of Kuchierabu, [3),4),5),6)] the following results were obtained.

The ichthyofauna is divided into four groups:

(1) the fishes that range from the Indo-Pacific tropical regions to southern Japan; they account for 170 species (I, no mark) in all, i.e. 78.3 % of the whole ichthyofauna known;

(2) the fishes that range from the Indo-Pacific tropical regions to Kuchierabu Island and have Kuchierabu as their northernmost limit; they account for 36 species (II, marked by°), 16.5 %;

(3) the fishes that range from southern Japan to the Ryukyu Islands and have the Ryukyu Island as their southernmost limit; they account for 10 species (III, marked by°°), 4.6%;

(4) the fishes that range from southern Japan to Kuchierabu Island and have Kuchierabu as their southernmost limit; they account for 1 species (IV, marked by°°°), 0.4%.

Groups I and II are tropical species, while groups III and IV may be regarded as subtropical species.[2] In term of percentages, the proportions of groups I and II are higher than the proportions of groups III and IV. It was found that a large part of the ichthyofauna of Kuchierabu Island consists of tropical species.

For this reason it is preferable to consider Kuchierabu as a peripheral component of the Ryukyu faunal area rather than as a component of the southern Japan faunal area.

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口永良部島の磯魚

具島健二・村上　豊

琉球列島と九州本土の間に位置する口永良部島において，1970年10月から1973年11月の間に14回に亘る磯魚の採集を行い，217種の磯魚を同定した。これらの種は地理的な分布圏の差異により，以下に述べる4グループに分けられる。

1）インド・太平洋熱帯域から日本南部まで分布する種；170種（78.3％）
2）インド・太平洋熱帯域から口永良部島まで分布し，口永良部島を分布の北限とする種；36種（16.5％）
3）日本南部から琉球列島まで分布し，琉球列島を分布の南限とする種；10種（4.6％）
4）日本南部から口永良部島まで分布し，口永良部島を分布の南限とする種；1種（0.4％）

以上の結果から口永良部島の魚類相は，日本南部の亜熱帯性魚類相よりも，琉球列島の熱帯性の魚類相に近いと考えられる。