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First Record of the Coral Catshark, *Atelomycterus marmoratus*, from Kuchierabu Island, Southern Japan

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The coral catshark, *Atelomycterus marmoratus* (Bennett, 1830), is widely distributed in the Indo-West Pacific, from Pakistan to Taiwan, and to New Guinea (Compagno, 1984b). A relatively common, coral reef inhabitant, this harmless species forms a minor catch of inshore artisanal fisheries (Compagno, 1984b). While examining coral reef fishes collected by KG in the 1970s during an ecological study of the coral reef fishes around Kuchierabu Island (38°28′N, 130°10′E), off Kyushu (Fig. 1), a number of catshark specimens were found. Fourteen specimens were subsequently identified as *A. marmoratus*, being the first record of that species from Japan. The specimens are described in detail below, since they represent a noteworthy northern range extension of *A. marmoratus*.

The method for measurements followed Compagno (1984a). The specimens are deposited in Kochi Senior High School, KSHS.

Atelomycterus marmoratus (Bennett, 1830)
(New Japanese name: Sango-torazame)
(Figs. 2, 3)

Materials. KSHS 22355, male, 607 mm TL (total length), Kuchierabu I., depth unknown, Oct. 1970; KSHS 22350–22354, 22357, 22359, 22360, 7 males, 496–645 mm TL, KSHS 22348, 22349, 22352, 22356, 22361, 5 females, 520–612 mm TL, Nishiura Bay, Kuchierabu I., sandy bottom encircled by dead corals, 7 m depth, gill net, Aug. 1971; KSHS 22358, female, 585 mm TL, Honmura Bay, Kuchierabu I., angled from sandy bottom with large rocks, depth unknown, 30 Oct. 1975.

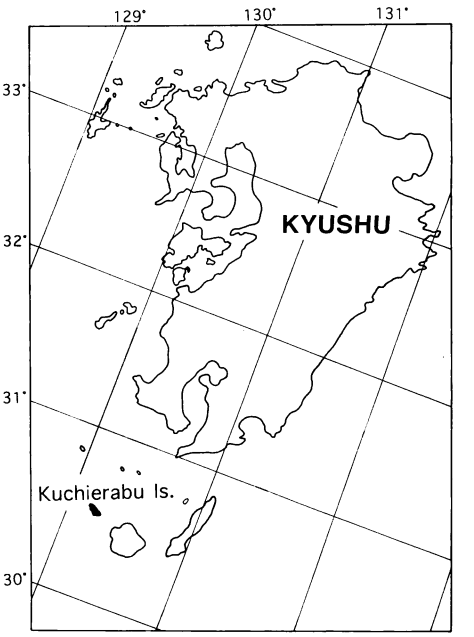

Fig. 1. Map showing location of Kuchierabu Island, capture locality of *Atelomycterus marmoratus*.

Description. Total lengths and proportional measurements are given in Table 1.

Body moderately slender, cylindrical; tail compressed (Fig. 2a). Head slightly depressed; interorbital space flat. Snout short, round; preoral length about 1/2 mouth width. Eyes small, oblong, length less than 1/2 interorbital width. Anterior nasal flaps

Table 1. Total length and proportional measurements (in % of TL) of 14 *Atelomycterus marmoratus* specimens from Japan

	8 males	6 females
Total length (mm)	496–645	520–612
Head length	17.3–18.9	17.0–18.9
Pre-first dorsal length	40.0–43.7	41.0–44.1
Pre-second dorsal length	62.6–65.9	63.3–67.4
Prepectoral length	16.6–17.9	16.0–18.2
Prepelvic length	35.7–37.8	36.9–38.8
Preanal length	58.8–63.8	61.0–64.1
Pelvic–anal space	17.4–20.6	18.9–20.0
Preorbital length	4.0– 5.9	5.1– 5.8
Preoral length	3.6– 5.4	3.4– 4.0
Mouth width	6.6– 7.1	6.0– 7.7
Clasper inner length	4.6–14.4	
Interorbital space	4.9– 5.2	4.7– 5.0
Eye length	2.4– 3.0	2.6– 3.4

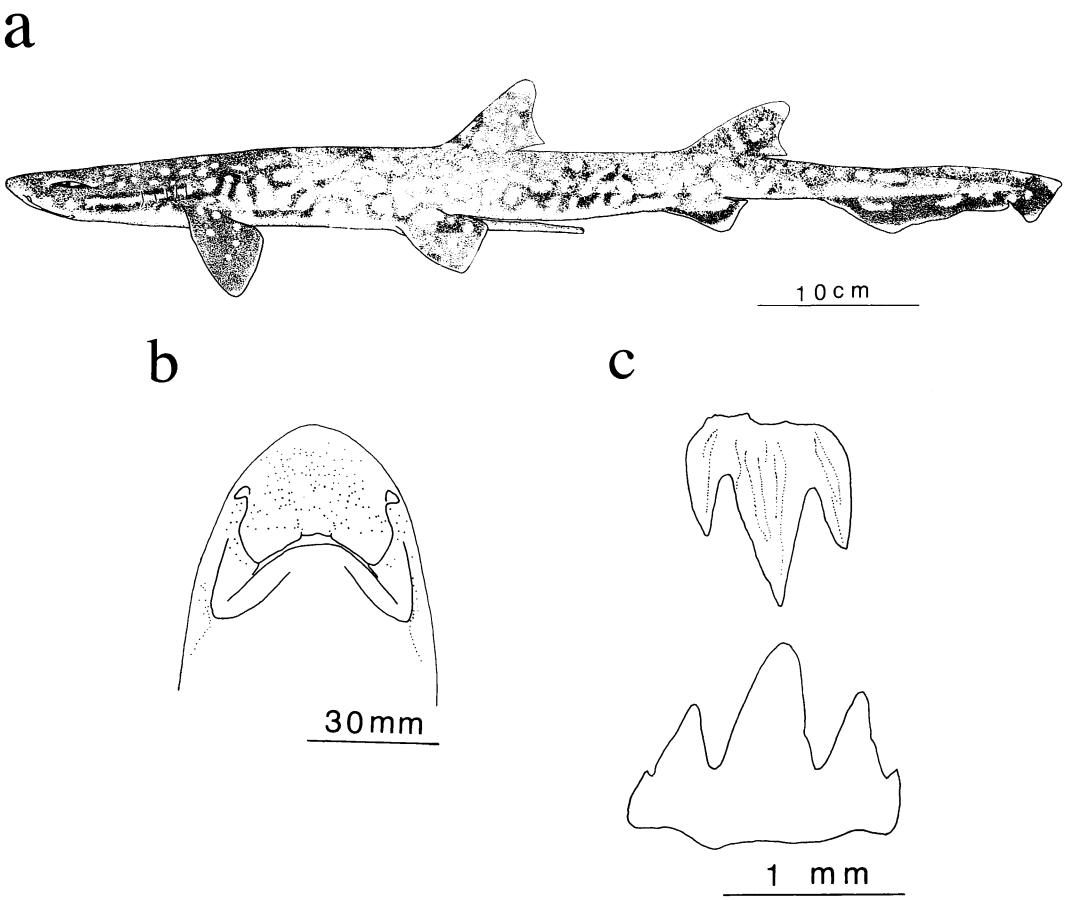

Fig. 2. a) *Atelomycterus marmoratus*, KSHS 22354, male, 645 mm TL, Kuchierabu Island; b) ventral view of head of KSHS 22354; c) upper (top), and lower tooth, from near symphysis, *A. marmoratus*, KSHS 22359, male, 630 mm TL, from Kuchierabu Island.

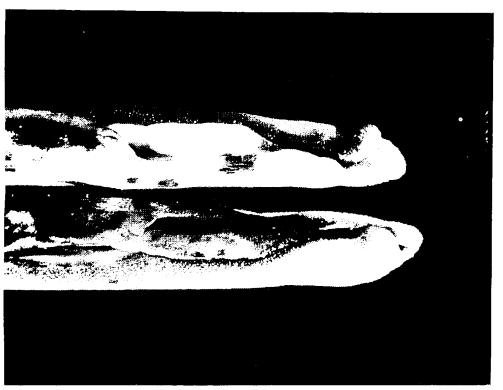

Fig. 3. Dorsal view of clasper glans of *Atelomycterus marmoratus*, KSHS 22354.

enlarged, very broad, reaching posteriorly to mouth (Fig. 2b); nasoral grooves present. Mouth semi-angular; preoral length shorter than snout length. Labial furrow on upper jaw longer than that on lower jaw (Fig. 2b). Teeth small; lower jaw teeth with 3–5 cusps, middle one largest; upper jaw teeth tricuspid, slightly smaller than lower jaw teeth (Fig. 2c).

Two dorsal fins about equal in size; 1st dorsal fin at middle of body, originating over posterior half of pelvic fin base, rear end of 1st dorsal fin base beyond rear margin of pelvic fin; origin of 2nd dorsal fin above first quarter of anal fin base. Anal fin much smaller than 2nd dorsal fin. Caudal fin broad, short, less than 1/6 TL. No supracaudal crests on denticles. Pectoral fin originating below 4th gill slit.

Length of claspers of KSHS 22357 (495 mm TL)

1/5 of distance between posterior end of pelvic fin base and anal fin origin; those of remaining adults (570–645 mm TL) longer than 2/3 same. Clasper glans rather round (Fig. 3).

Color in preservative.—Ground color of body and fins dark brown, belly whitish. Small, white spots scattered on all fins, and lateral and dorsal surfaces of body; larger white spots on lower body, outlined by vague, blackish spots, sometimes adjoining neighboring spots. Dorsal fin tips white.

Remarks. Following Compagno (1984b), the present material was as belonging to the catshark genus *Atelomycterus*, owing to the approximately equally-sized dorsal fins, greatly expanded anterior nasal flaps reaching the mouth, and the presence of nasoral grooves and long labial furrows. Although Springer (1979) doubted the validity of the latter, Compagno (1984b) showed the genus to be represented by two species: *A. marmoratus* (Bennett, 1830) and *A. macleayi* Whitley, 1939. The color pattern of both species is highly variegated, the former being distinguished from the latter, known only from Northern and Western Australia and Queensland, in lacking grey saddle markings (present in the latter), and having extremely attenuated adult male claspers, reaching about at least 2/3 of the distance between the pelvic fin insertion and the anal fin origin (stout, moderately elongated, reaching about halfway of the same distance) (Compagno, 1984b). Compagno (1984b) considered that adult male *A. marmoratus* ranged from 470 to 620 mm. Although the 495 mm TL male specimen had short claspers, reaching 1/5 of the pelvic fin insertion-anal fin origin distance, the length of the claspers of the second smallest male (575 mm TL) 71% of same, suggested the former to be immature. All specimens examined were devoid of saddle markings.

Teng (1958) first recorded the occurrence of *A. marmoratus* from Taiwan on the basis of a single specimen from P'eng-chia Hsü, a small island in the northernmost district of Taiwan. Judging from Chen and Joung (1993), no further Taiwanese records have been added. Yoshino and Aonuma (1993) recorded 15 catshark species, except for *A. marmoratus*, from Japan, despite the latter being frequently caught by hook and line along the coasts of Kuchierabu Island (KG, pers. obs.). The present record represents a northern range extension of *A. marmoratus*, and confirms the species as a shallow coral reef inhabitant.

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Literature Cited

Chen, C.-T. and S.-J. Joung. 1993. Chondrichthyes. Pages 29–92 *in* S.-C. Shen, editor in chief. Fishes of Taiwan. Department of Zoology, National Taiwan University, Taipei. (In Chinese.)

Compagno, L. J. V. 1984a. FAO species catalogue. Vol. 4. Sharks of the world. An annotated and illustrated catalogue of shark species known to date. Part 1. Hexanchiformes to Lamniformes. FAO Fisheries Synopsis, (125) 4, pt. 1: i–viii + 1–249.

Compagno, L. J. V. 1984b. FAO species catalogue. Vol. 4. Sharks of the world. An annotated and illustrated catalogue of shark species known to date. Part 2. Carcharhiniformes. FAO Fisheries Synopsis, (125)4, pt. 2: i–x + 251–655.

Springer, S. 1979. A revision of the catshark, family Scyliorhinidae. NOAA Tech. Rep. NMFS Cir., 422: i–vi + 1–152.

Teng, H.-T. 1958. Studies on the elasmobranch fishes from Formosa. Part I. Eighteen new shark records from Formosa. Taiwan Fish. Res Inst., (3): 1–30. (In Chinese.)

Yoshino, T. and Y. Aonuma. 1993. Family Scyliorhinidae. Pages 99–102, 1240 *in* T. Nakabo, ed. Fishes of Japan with pictorial keys to the species. Tokai Univ. Press, Tokyo. (In Japanese.)

日本初記録のサンゴトラザメ（新称）

山川　武・町田吉彦・具島健二

鹿児島県の口永良部島の珊瑚礁域で採集された 14 個体に基づき，トラザメ科の日本初記録種 *Atelomycterus marmoratus* サンゴトラザメを報告した．*Atelomycterus*（サンゴトラザメ属：新称）は第一背鰭と第二背鰭がほぼ同大であること，前鼻弁が著しく拡大し，口に達すること，nasoral groove があることでトラザメ科の他の属と異なる．本属には他に *A. macleayi* が知られているが，本種は鞍状斑紋がないこと（*A. macleayi* にはある），成熟した雄の交尾器は腹鰭基底後端から臀鰭始部の 2/3 に達する（ほぼ 1/2）ことを特徴とする．本種はパキスタンより東方のインド・西部太平洋域に広く分布し，西部太平洋における北限はこれまで台湾北部の澎佳嶼であったが，本報告により日本沿岸の珊瑚礁域に生息することが初めて確認された．

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