Johnius distinctus (Tanaka, 1916), a Senior Synonym of *J. tingi* (Tang, 1937) (Perciformes, Sciaenidae)

Kunio Sasaki and Kunio Amaoka

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Johnius (*Johnieops*) *tingi* (Tang, 1937), originally placed in *Pseudosciaena*, has been viewed as the valid name for a Chinese species of the Sciaenidae. Examination of the holotype of *Sciaena distincta* Tanaka, 1916 revealed, however, that this fish is conspecific with *J. tingi*. The purpose of this paper is to demonstrate the identity of these two nominal species and to redescribe the holotype of *S. distincta*, as well as some comparative material. Methods of counts and measurements follow those of Sasaki and Kailola (1988). Standard length and head length are expressed throughout as SL and HL, respectively. Institutional abbreviations for specimens are as listed in Leviton et al. (1985). Counts and proportions of the comparative material are given in parentheses when different from those of the holotype.

Johnius (*Johnieops*) *distinctus* (Tanaka, 1916) (Japanese name: Abura-guchi) (Fig. 1)

Sciaena distincta Tanaka, 1916: 26 (type locality: Nagasaki Market, Japan).

Pseudosciaena tingi Tang, 1937: 54, fig. 1 (type locality: Amoy, China).

Material examined. ZUMT 6811, 200.5 mm SL, Oct. 1915 (holotype of *S. distincta*); HUMZ 107750, 201.9, HUMZ 107751, 203.5, HUMZ 107752, 206.2, HUMZ 107753, 174.2, HUMZ 107754, 181.7, HUMZ 107755, 186.6, HUMZ 107792, 178.8, all from Taiwan Strait, 10 Apr. 1986.

Description. Dorsal rays X+I, 30 (28–31); anal rays II, 7; pectoral rays 19 (18–20); lateral line scales ca. 50 (49–50), scales above lateral line 10 (ca. 7–11), below lateral line 14 (ca. 13–ca. 14); gill rakers 5+1+10 (5–6+1+9–12); vertebrae 10+15 (mostly 10+15, 11+14 in one), last pleural rib on 11th vertebra, first anal proximal radial between 11 and 12th vertebrae; predorsal bones 3; swimbladder appendages not counted (16 in one). Proportions as % SL: HL 31.5 (30.6–33.1); body depth 30.1 (27.2–31.4); body width 16.2 (14.8–17.7); caudal peduncle length 23.5 (21.9–24.9); caudal peduncle depth 10.9 (9.3–10.7); snout length 9.8 (8.9–10.5); eye diameter 7.0 (6.5–8.0); interorbital width 8.5 (8.4–9.6); upper jaw length 13.0 (12.3–14.0); lower jaw length 14.2 (13.4–15.1); pectoral fin length 24.2 (22.2, 22.5 in two); pelvic fin length 18.8 (16.0–18.9 in five); second dorsal spine length 14.4 (15.2 in one); third dorsal spine length 15.6 (broken in all); fourth dorsal spine length 13.1 (13.7 in one); fifth dorsal spine length 11.5 (12.7 in one); second anal spine length—spine broken (8.1–10.5); gill raker length 1.3 (1.2–1.7); gill filament length 3.9 (3.4–4.2). Proportions as % HL: snout length 31.1 (26.3–32.8); eye diameter 22.2 (20.7–24.6); interorbital width 27.1 (25.7–29.7); upper jaw length 41.2 (40.2–43.3); lower jaw length 45.0 (43.2–46.0); second anal spine length—spine broken (25.5–32.5); gill raker length 4.3 (3.5–5.1); gill filament length 12.5 (10.8–12.7). Proportions as % eye diameter: gill raker length 19.3 (14.8–24.6); gill filament length 56.4 (44.3–61.6).

Snout steep, obtusely rounded, not projecting in front of upper jaw. Mouth subterminal, cleft at an angle of 20° when mouth closed. Upper jaw projecting beyond lower jaw; maxillary reaching middle to posterior margin of eye.

Snout pores five upper and five marginal, outer pair of the latter in a deep notch. Mental pores three pairs, the anterior very narrowly separated in holotype, opening in one common pore in comparative material.

Upper jaw with enlarged teeth in single outer row, and inner band of small conical teeth consisting of four or five rows. Lower jaw with inner row of enlarged teeth, and three (near symphysis) to one (near mouth corner) outer rows of small conical teeth. Enlarged teeth regularly spaced, those on upper jaw about twice as large as those on lower.

Eye elliptical. Nostrils just before eye; anterior and posterior nostrils ovoid. Gill rakers short, spinulose, somewhat club-shaped; gill filaments about three times as long as gill rakers around angle.

Scales cycloid on head and anterior part of chest; ctenoid on body. Soft dorsal and anal fins scaly. Third dorsal spine longest. First ray of pelvic fin with filament. Second anal spine broken in holotype; slender and weak, its length

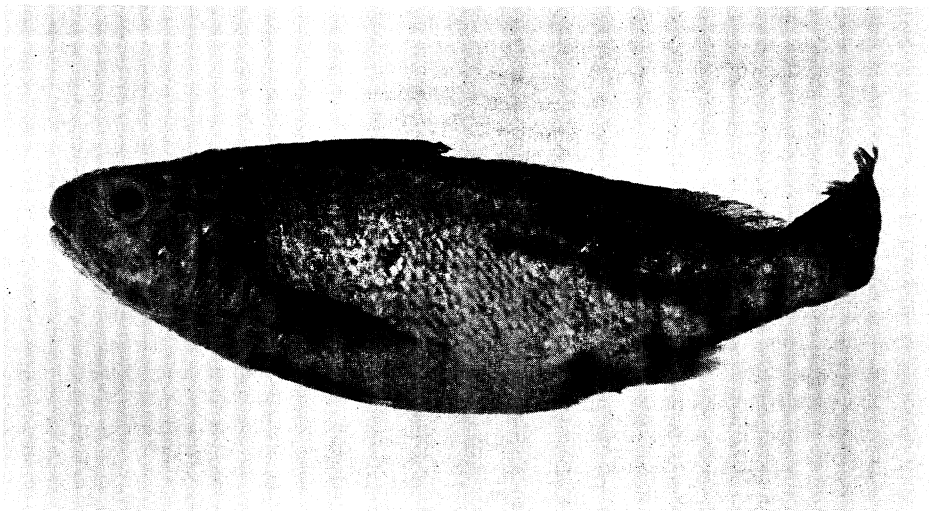

Fig. 1. Holotype of *Johnius distinctus* (Tanaka, 1916), ZUMT 6811, 200.5 mm SL.

about 2/3 of first anal soft ray in comparative material. Caudal fin rhomboidal with pointed tip. Swimbladder and sagitta *Johnius*-type (sagitta not examined in holotype). Drumming muscle present in both sexes.

Colour in preservative (holotype greatly faded): body dark grey on back and flank, creamy white below; lateral line pale along its length except on caudal fin, conspicuous in dark grey flank. Mouth lining pale except for grey speckled palate; operculum black owing to blackish branchial cavity; peritoneum black. Upper 1/3 and base of spinous dorsal black, upper margin and base of soft dorsal black; pectoral fin grey; pelvic fin pale; anal fin sprinkled with few melanophores; caudal fin grey.

Remarks. The holotype, the only type specimen of *Sciaena distincta*, has a hammer-shaped swimbladder with a series of arborescent appendages along its sides. This is not a character of *Sciaena*, but of *Johnius*. Lower jaw with a row of enlarged teeth further justifies the placement of this species in the subgenus *Johnieops* of *Johnius*. Matsubara's (1937) synonymy of this species with *Larimichthys crocea* (Richardson), subsequently followed by Chu (1956) and Trewavas (1977), is thus obviously wrong. *L. crocea* is a very different species (see Trewavas), though the scaly dorsal fin and weak anal spine on which Matsubara based his synonymy are similar.

Tang (1937) described *Pseudosciaena tingi* as new on the basis of five specimens (205–275 mm SL (TL ?)) deposited at the Zoological Museum of the University of Amoy. Unfortunately, the type specimens were apparently lost during World War II when the university was relocating (Dr. S.-Z. Li, pers. comm.).

Tang (1937) described the lateral line in his species as pale, whereas Tanaka (1916) did not refer to this feature in the description of *J. distinctus* and its holotype has lost its body colour. However, since we do not recognize any other significant differences between the holotype and our comparative material from Taiwan Strait, we assume that the lateral line was also pale in the holotype, and that *J. tingi* is a synonym of *J. distinctus*. The only other species of *Johnius* known to have a pale lateral line is *J. carutta* Bloch, which differs from *J. distinctus* in having the teeth of the lower jaw uniform in size (diagnostic feature of the subgenus *Johnius*) and cycloid scales on the anterior part of the body (Trewavas, 1977).

Trewavas (1977) stated that *Johnius tingi* is very closely related to *J. vogleri* (Bleeker), but differs in the shorter jaws. The holotype and the comparative material of *J. distinctus* also have the short jaws (see description) agreeing well with Tang's description (upper jaw length 41.6% HL, lower jaw length not given), but differing from *J. vogleri* (upper jaw length 43.1–47.0, lower jaw length 45.8–52.9; data from Trewavas and 12 comparative specimens). Furthermore, we can add to the characters distinguishing *J. distinctus* from *J. vogleri* one unrecorded feature, namely

the number of the pleural ribs, the last being on the 11th vertebra in *J. distinctus* (eight specimens examined) and on the 10th in *J. vogleri* (12 specimens). Hence, in this character too, *J. distinctus* is not identical with *J. vogleri*, but resembles *J. tingi*.

Most characters from the holotype and the comparative material of *Johnius distinctus* closely match those described by Tang (1937). As Trewavas (1977) pointed out, however, Tang gave rather high gill raker count (6–14=6+1+13) and very narrow interorbital width (20.4% HL). The former is probably due to the inclusion of the denticulate flat plates in the count, and the latter must be an error since it is narrower than that of any species of the subgenus *Johnieops*, and does not agree with Tang's statement, "interorbital broad". Accordingly, we do not regard these two discrepancies as real obstacles in the recognition of the identity of the two nominal species. From the evidence presented in the other characters, we find no necessity to maintain the specific junior name *tingi* as valid.

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Literature cited

Chu, K.-Y. 1956. A review of sciaenoid fishes of Taiwan. Rep. Inst. Fish. Biol., Minist. Economic Affairs and Natn. Taiwan Univ., 1(1): 13–46, pls. 1–5.

Leviton, A. E., R. H. Gibbs, Jr., E. Heal and C. E. Dawson. 1985. Standards in herpetology and ichthyology: Part I. Standard symbolic codes for institutional resource collections in herpetology and ichthyology. Copeia, 1985(3): 802–832.

Matsubara, K. 1937. Sciaenoid fishes found in Japan and its adjacent waters. J. Imp. Fish. Inst. Tokyo, 32(3): 25–86. (In Japanese.)

Sasaki, K. and P. J. Kailola. 1988. Three new Indo-Australian species of the sciaenid genus *Atrobucca*, with a reevaluation of generic limit. Japan. J. Ichthyol., 35(3): 261–277.

Tanaka, S. 1916. Four new species of Japanese fishes. Zool. Mag., Tokyo, 28(327): 26–28. (In Japanese.)

Tang, D.-S. 1937. A study of sciaenoid fishes of China. Chi. Mar. Biol. Bull., 2: 47–88, pl. 1.

Trewavas, E. 1977. The sciaenoid fishes (croakers or drums) of the Indo-West-Pacific. Trans. Zool. Soc. Lond., 33(4): 235–541, pls. 1–14.

(Laboratory of Marine Zoology, Faculty of Fisheries, Hokkaido University, Hakodate 041, Japan)

Johnius distinctus (Tanaka, 1916) はアブラグチ _J. tingi_ (Tang, 1937) の古参シノニム

佐々木邦夫・尼岡邦夫

Sciaena distincta Tanaka, 1916 の完模式標本を検討した結果，本種は従来その学名が有効とされてきたコニベ属の *Johnius tingi* (Tang, 1937) と同一であることが判明した．したがって *J. distinctus* (Tanaka) に先取権があり，この学名が命名法上有効である．Tanaka は和名チョウセングチを提唱しているが，安定性の見地から現在広く用いられている和名アブラグチを用いるべきである．

(041 函館市港町 3-1-1 北海道大学水産学部水産動物学講座)