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SHORT NOTE

REDESCRIPTION AND DESIGNATION OF A NEOTYPE FOR *SARDINELLA HUALIENSIS* (CHU & TSAI, 1958) (PISCES: CLUPEIDAE)

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Shih-Chieh Shen and Shen-Chee Wang (1991) Redescription and designation of a neotype for *Sardinella hualiensis* (Chu & Tsai, 1958) (Pisces, Clupeidae). *Bull. Inst. Zool., Academia Sinica* **30**(1): 59-62. A neotype is designated and described for the clupeid fish, *Sardinella hualiensis* (Chu & Tsai, 1958), because of the loss of the type specimens. Among 8 specimens recently collected from Hualien, a neotype for this species was selected and a detail description and photos of this species were also completed.

Key words: *Sardinella hualiensis*, Neotype, Taiwan.

The clupeid fish, *Sardinella hualiensis* (Chu and Tsai, 1958), is an uncommon species limited to the eastern waters off of Taiwan and the Southern China Sea. The species was originally placed in the genus *Harengula* which is endemic to Western Atlantic. Unfortunately the type specimens of this species were eventually lost, but the description, based on a holotype and 19 cotypes labelled as No. 12567, was documented (Chu and Tsai, 1958). The number given above was probably the field collection number and the specimens were kept in a separate laboratory, and was thus not entered in the National Taiwan University Museum (NTUM). The specimens were lost after the senior author (Chu) left the University twenty years ago. On January 3, 1989, we collected specimens of this species at Hualien, the first time specimens have been found since the loss of the type specimens. Herein, we redescribe and assign the largest specimen as the neotype of *Harengula hualiensis* Chu and Tsai, 1958, for the stability of nomenclature.

MATERIALS AND METHODS

The specimens ranging the standard length 149.0-160.3 mm were examined, but only 8 of them are described in this paper. All of them were caught in Hualien Harbor by drift gill-net. They now reside in the National Taiwan University Museum, Taipei, Republic of China. Methods of measurement follow those of Chen (1965) and Chu and Tsai (1958).

Sardinella hualiensis (Chu and Tsai, 1958)

Figs. 1-5

Harengula hualiensis Chu and Tsai, **1958**: 116 (Hualien, Taitung, on eastern coast of Taiwan)

Sardinella hualiensis Wongratana, **1980**: 126, pls. 65, 66 (revision); Chiu, **1982**: 61; Shen, **1984**: 9; Whitehead, **1985**: 101 (review).
Herklotsichthys hualiensis Chen, **1986**: 270.
Sardinella brachysoma Chan, **1965**: 19.

Neotype: NTUM 07567, 155.3 mm SL, January 3, 1989, Hualien, by gillnet.
Nontype materials: NTUM 07568, three specimens, 149.0-156.1 mm, January 3, 1989, Hualien; NTUM 07569, four specimens, 153.2-160.3 mm, January 3, 1989, Hualien, all by gillnet.

DESCRIPTION

The following description was based on 8 specimens. Counts and measurements for the neotype are given first, while those for the rest of the specimens are given in parenthesis.

D iv, 14 (14 or 15); P i, 14 (14 or 15); V i, 7 (7); A iii, 16 (16 to 18); scutes 18+13 =31 (18+12 or 13=30 or 31); scales in lateral series 41 (41 or 42), in transverse series 11 (11 or 12), pre-dorsal 14 (13 to 16); gillrakers 39+66 (37 to 44+64 to 70); vertebrae 29+15=44 (29 to 28+15 to 16= 44).

In percentages of standard length: body width 16.23 (13.97 to 15.57), body depth 33.93 (32.21 to 33.57), head length 25.37 (24.27 to 27.05), snout length 6.44 (5.43 to 6.58), eye diameter 7.47 (6.99 to 7.52), length of upper jaw 9.59 (9.23 to 10.77), length of lower jaw 4.06 (2.74 to 4.67); pectoral fin length 19.00 (17.84 to 20.43), pelvic fin length 10.62 (10.42 to 12.34), height of dorsal fin 12.04 (10.05 to 12.36), length of dorsal fin base 15.84 (12.54 to 16.85), length of anal fin base 14.62 (14.59 to 16.78), pre-dorsal distance 40.24 (38.63 to 44.10), pre-anal distance 80.23 (77.48 to 82.44), length of caudal fin 7.79 (7.37 to 7.61).

Body oblong and compressed, width 2.09-2.38 in depth, the letter being 3 in SL. Belly strongly keeled, being more prominent behind pelvic fin base. Eye covered by adipose lid except for narrow vertical slit, diameter of eye slightly longer than snout. Upper jaw reaching the anterior margin of pupil when mouth is fully closed. Second supra-maxilla paddle-shaped, with the upper and lower parts more or less in equal size. Pre-maxilla toothless, while the maxilla with tiny teeth along its lower edge. Symphysis of lower jaw, tongue and both ecto- and endo-pterygoids with small conical teeth. Gillrakers fine and slender, the longest about 1¼ eye diameter. Gill opening with two fleshy outgrowths along hind margin. Last two anal soft-rays somewhat longer and more branched than preceding ones.

Scales cycloid, not deciduous. Paired scales along predorsal midline. Bases of dorsal and anal fins with low scale sheaths. Scales from region I (Figs. 2 and 3) and II (Figs. 2 and 4) on body side with 1-4 continuous vertical striae, preceded by 2-4 striae interrupted at

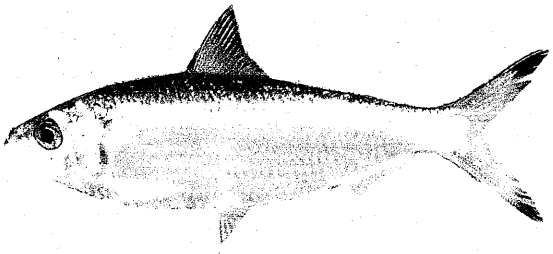


Fig. 1. Neotype of *Sardinella hualiensis*, NTUM 07567, 155.3 mm SL., January 3, 1989; Hualien.

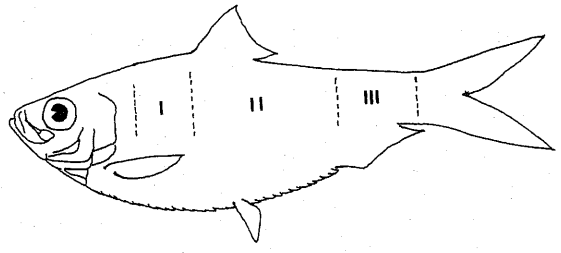
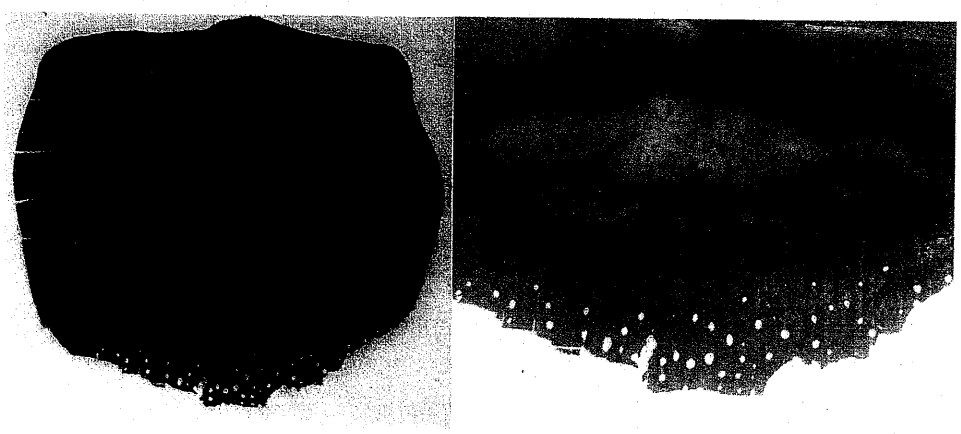


Fig. 2. Three regions on body side, from which the scales were removed for study. (after Chan, 1965)



a b

Fig. 3. Scale removed from region I shown in Fig. 2.

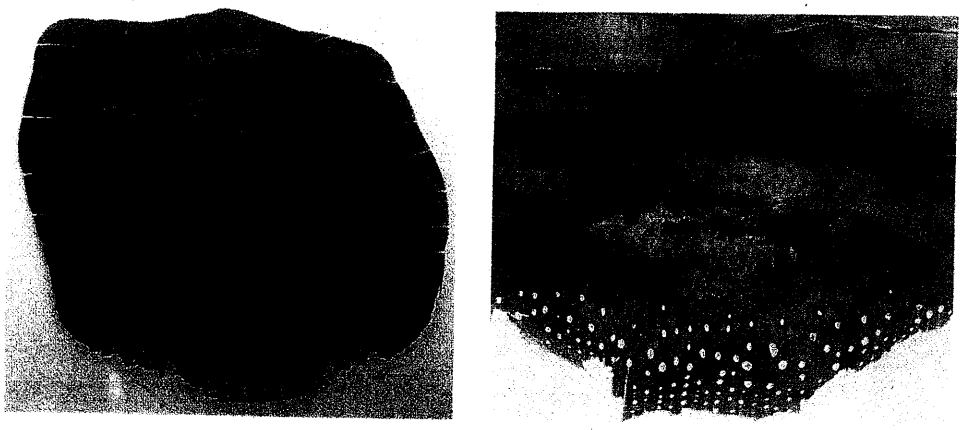


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Fig. 4. Scale removed from region II shown in Fig. 2.

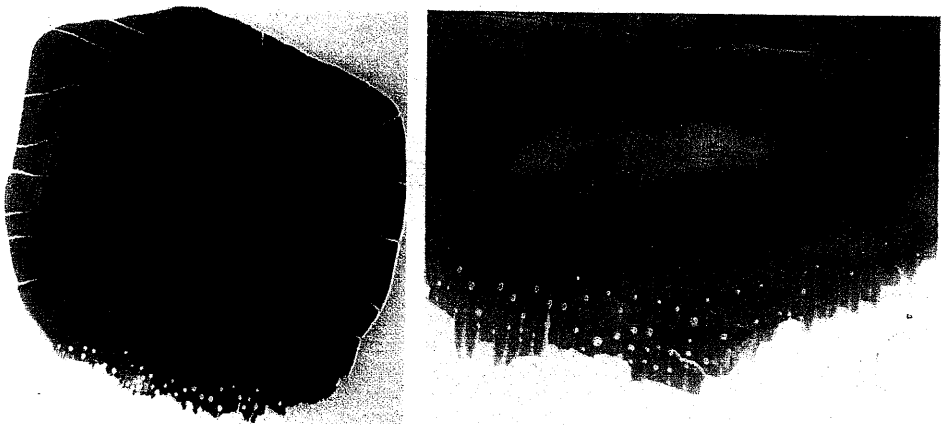

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Fig. 5. Scale removed from region III shown in Fig. 2.

center of scale. Scales from region III (Figs. 2 and 5) on body side with 4-7 continuous vertical striae and 1-3 discontinuous striae, some scales with entirely continuous striae. Posterior (exposed) part of scale perforated with the posterior margin fimbriated.

Color of fresh specimens (Fig. 1) dark blue on back and pale silver on sides and belly, the latter being tinged with yellow after pelvic fins. A black spot at the base of the anteriomost 4 (unbranched) dorsal finrays. A black blotch above the operculum. Snout tip, caudal lobes and dorsal fin blackish. Color of preserved specimens generally blackish, with 4-5 horizontal dark lines dorsolaterally and pale yellowish ventrally.

Remarks: *Sardinella hualiensis* resembles *S. richardsoni* and *S. zunasi*, but differs from them in having a dark spot at dorsal origin. It also resembles *S. brachysoma*, but differs from it in having black caudal fin tips.

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花蓮鮣丁的重新描述並建立新模式標本

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花蓮鮣丁 *Sardinella hualiensis* (Chu & Tsai, 1958) 之模式標本由於保存不當業已遺失，因此有必要重新建立新模式標本。在「臺灣魚類相之研究調查」計畫的例行採集調查中，筆者等於花蓮外海重新採獲花蓮鮣丁之標本 8 尾。本文除重建新模式標本外並作詳細分類描述。