Rediscovery of the Bitterling, *Tanakia lanceolata*, in China (Pisces, Cyprinidae)

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*Tanakia lanceolata* (Temminck and Schlegel, 1846) is distributed in Korea and Japan (Mori, 1936; Uchida, 1939; Nakamura, 1969; Arai and Akai, 1988). Mori (1935) reported one specimen of *Acheilognathus lanceolata* (=*Tanakia lanceolata*) from Feng Cheng (Fenhuang-chung, 40°28'N, 124°03'E), Liaoning Province, China, as *A. lanceolata intermedia*, although it had been previously reported as *A. signifer* (see Mori, 1928). Thereafter Mori ignored his own record of *T. lanceolata* from China, and records of the species have not yet been included in any Chinese literature. As regards *Tanakia* species in China, *Tanakia himantegus* (Günther, 1868) has been considered to be the only species distributed in Kiangsu, Ahnwei and Fukien Provinces and Taiwan (Gunther, 1868; Miao, 1934; Woo, 1964; Wu and Shen, 1984; Chen et al., 1990).

Recently, *Paracheilognathus himantegus* (=*Tanakia himantegus*) was reported from Ai He River, Yalu River System, Liaoning Province, northern China (Xie, 1987), a geographically interesting record owing to the species having been considered to be subtropical. Upon reexamination of 17 specimens of *Tanakia himantegus* sensu Xie (1987), the specimens from Liaoning Province were found to be *Tanakia lanceolata* (Fig. 1).

**Methods**

Counts and measurements followed Hubbs and Lagler (1947). The positions of the first dorsal and anal fin ray pterygiophore (D-PTG-1 and A-PTG-1, respectively) were examined from radiographs. When the proximal radial of D-PTG-1 was inserted between neural spines of the nth and (n + 1)th vertebral centra, the position of D-PTG-1 was expressed as D-PTG-1 = n. When the proximal radial of A-PTG-1 was inserted between haemal spines of the mth and (m + 1)th vertebral centra, or in front of the first haemal spine being supported by vertebral centrum (m + 1), the position of A-PTG-1 was expressed as A-PTG-1 = m.

Institutional abbreviations are as follows: IHAS, Institute of Hydrobiology, Academia Sinica, Wuhan, China; NSMT, National Science Museum, Tokyo; RIFFL, Research Institute for Freshwater Fisheries of Liaoning Province, China; RMNH, National Museum of Natural History (Leiden), Leiden; YCM, Yokosuka City Museum, Yokosuka, Japan.

*Fig. 1. Tanakia lanceolata* (NSMT-P. 46155-2, previous cat. no. RIFFL 802883), female, 54.5 mm in SL, from Ai He River, Liaoning Province, China.
Tanakia lanceolata from China

Fig. 2. Pharyngeal teeth of Tanakia lanceolata (NSMT-P. 46156-1, previous cat. no. RIFFL 802868), male, 48.6 mm SL, from Liaoning Province.

Classification of genera of the subfamily Acheiloagnathinae follows Arai and Akai (1988).

Results

Morphometric and meristic data and body color of 17 specimens from Liaoning Province, China, are shown in Table 1. The dental formula of the pharyngeal teeth was 0.5–5.0, and five teeth being arranged in a row on the pharyngeal bone on each side (Fig. 2). They agreed well with those of Tanakia lanceolata (Suzuki and Hibiya, 1985). The number of gill rakers on the external side of the first gill arch was 10 (Fig. 3). A transverse row of black spots was present on the fin membrane of the dorsal fin. The barbel length ranged from 1.5 to 2.8 in the eye diameter.

Discussion

As shown in Table 1, the 17 Chinese specimens described herein belong to the genus Tanakia and agree well with Tanakia lanceolata, differing from T.

Table 1. Comparison of characteristics of Tanakia lanceolata and T. himantegus. Figures in parentheses indicate number of specimens

<table>
<thead>
<tr>
<th>Locality</th>
<th>T. lanceolata</th>
<th>T. himantegus</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Japan</td>
<td>Honshu</td>
</tr>
<tr>
<td>No. of fish</td>
<td>1*</td>
<td>3</td>
</tr>
<tr>
<td>Dorsal fin</td>
<td>iii, 8</td>
<td>i, 8</td>
</tr>
<tr>
<td>Anal fin</td>
<td>iii, 9</td>
<td>iii, 9–10</td>
</tr>
<tr>
<td>br. A–br. D</td>
<td>11</td>
<td>11(3)</td>
</tr>
<tr>
<td>D-PTG-1</td>
<td>18</td>
<td>17(2)</td>
</tr>
<tr>
<td>A-PTG-1</td>
<td>36</td>
<td>35(2), 36(3),</td>
</tr>
<tr>
<td>Vertebræb</td>
<td>34</td>
<td>35(3)</td>
</tr>
<tr>
<td>LLSec</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Color of preserved specimens
Longitudinal lateral band short, narrow
Black spot anteriorly on body absent
Black margin on anal fin of the male narrow, indistinct
Black band on caudal fin absent

*Holotype; b) number of total vertebrae, including Weberian complex and a terminal pleurostyle; c) number of longitudinal scales.
himantegus in the number of scales in the lateral series, total vertebrae, the position of A-PTG-1, the number of branched anal fin rays minus the number of branched dorsal fin rays (br. A-br. D), and the body color. A figure of Paracheilognathus himantegus (Xie, 1987: 139, fig. 94) corresponds to other known T. himantegus, but differs from Tanakia specimens collected from Liaoning Province.

The present specimens also differed from T. koreensis and T. limbata in the number of branched dorsal fin rays (9 vs 8 in koreensis and limbata), the number of br. A-br. D. (1 vs 2–3 in koreensis and limbata), and color pattern (Kim and Kim, 1990). The present specimens can also be distinguished from T. tanago owing to the complete lateral line.

As regards classification of T. signifer and T. lanceolata, however, there may be some problems. Uchida (1939: 139–140) reported T. signifer to be very similar to T. lanceolata lanceolata, which has not yet been reported from Korea, in many morphological characters, but separated the two species on the basis of color pattern. The present specimens agreed well with T. intermedia sensu Uchida (1939) in morphological characters and color pattern, but differed from T. signifer in the number of branched dorsal fin rays (9 vs 8 in signifer) and color pattern. Conspicuous, wide black dorsal and anal fin margins, which are characteristic of male A. signifer, were absent in the males examined here. A recent study on the development of T. signifer suggested that species to be more similar to T. tanago than to T. lanceolata and T. limbata (Suzuki and Jeon, 1989).

Although Uchida (1939), followed by most Korean ichthyologists, treated T. intermedia as different from T. lanceolata by Nakamura (1969) is adopted here. T. intermedia sensu Uchida (1939) is considered to be T. lanceolata. On the basis of the above, it was concluded that T. lanceolata and T. signifer are both valid species.

Mori (1935) reported T. l. intermedia from Huchang (41°30'N, 127°05'E), on the Korean side of the Yalu River system. Records of Mori (1928, 1935) and the present records suggest that T. lanceolata is distributed widely in the Yalu River system.

Materials Examined

Tanakia lanceolata—RMNH 2501 (holotype of Capoeta lanceolata), 61.9 mm SL, Japan; NSMT-P. 29542, 69.2 mm SL, Kumamoto City, Kyushu, Japan; NSMT-P 29883 (2 specimens), 38.9–45.0 mm SL, Chikugo River, Fukuoka Pref., Kyushu, Japan; NSMT-P 44568 (7), 47.5–59.5 mm SL, Mobara City, Chiba Pref., Honshu, Japan; YCM-P 12701, 88.7 mm SL, Korea, and YCM-P 12705, 91.4 mm SL, Korea; RIFFL 802867, 802869, 802877, 802880, 802894, 802899, 802909, 802923, 802935, and 802944, 38.8–48.4 mm SL, Ai He River, Yalu River System, Feng Cheng Xian, Liaoning Province, China, coll. by Yuhao Xie, 19 Oct. 1980; NSMT-P 46155 (5) (previous cat. no. RIFFL 802836, 802883, 802889, 802900 and 802933), 35.3–54.5 mm SL, collection data as for RIFFL specimens; NSMT-P 46156 (2) (previous cat. no. RIFFL 802868 and 802878), dissected, 45.8–48.6 mm SL, collection data as for RIFFL specimens.

Tanakia himantegus—NSMT-P 47675 (8), 29.4–51.1 mm SL, Taiwan; IHAS 0877 and 0878, 44.8–45.9 mm SL, Longyang City, Fukuin Province, China.

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Literature Cited


Tanakia lanceolata from China


中国産ヤリタナゴの再発見

新井良一・解　玉浩・赤井　裕

1928年、森為三博士は中国の遼寧省凰城で採集した1尾の標本をAcheilognathus signiferと同定したが、1935年になってこの標本をヤリタナゴに分類し直した。しかし、この標本について、同定の根拠となるデータは示されてなかった。中国産ヤリタナゴの報告は、現在にいたるまで、この1標本のみで、中国の魚類学者は中国におけるヤリタナゴの分布を認めていない。

1987年、著者の1人、解は森博士の標本採集地と同水系と推定される、遼寧省鳳凰縣鴨鴨江水系の鴨河からタイワンタナゴTanakia himantegusを報告しているが、これらの標本を再精査したところ、ヤリタナゴであることが判明した。これで中国産Tanakia属はタイワンタナゴとヤリタナゴの2種となる。そこでタイワンタナゴと、中国、韓国、日本のヤリタナゴの標本を比較した。なお、森 (1935) は鴨鴨江上流域の厚昌（朝鮮）産ヤリタナゴを報告しているが、1928年の森博士の報告および今回の再発見を考慮すると、ヤリタナゴは国内をはさんで鴨鴨江水系に広く分布している可能性がある。

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