

FIRST CANADIAN RECORD OF YELLOWFIN BASS, *ANTHIAS NICHOLSI* FIRTH, TAKEN OFF NOVA SCOTIA

An unusual red and yellow fish was caught by Japanese squid fishermen on the *Mikani Maru* using a semipelagic bobbin trawl at 190 m, at station 140 on the Scotian Shelf at 1355 h, 3 July 1980. We identify the species as the yellowfin bass, *Anthias nicholsi* Firth, (Fig 1) described from off Virginia. This is the first record of the species for Canada. The specimen is catalogued as Nova Scotia Museum No. NSM-980-120-1(1).

Neither Leim and Scott (1966) nor Legendre (1978) list *Anthias* for the Atlantic coast of Canada. Markle, Scott and Kohler (1980) list *Anthias* (?), based on a 21.5-mm larva from off Nova Scotia. Our record therefore confirms the presence of the genus and provides the first record of the species for Canadian waters.

The following account follows the format used in Leim and Scott (1966). *Anthias* is usually placed in the subfamily Anthiidae of the family Serranidae, for example by Heemstra (1973), although some authors such as Smith (1961) place it in its own family, Anthiidae. Disjunct lateral lines are used to characterize some serranoid families and subfamilies (Böhlke 1960) yet many species of *Anthias* possess and some lack continuous lateral lines. Whether, in *Anthias*, disjunct lateral lines are evidence of parallelism in or polyphyly of the genus, is unknown. Our counts and proportions are followed in parentheses by Firth's (1933) counts for the type specimens.

Yellowfin bass, *Anthias nicholsi* Firth, 1933 Barbier ligne-en-paller

Description

Body moderately elongate, deepest at level of pelvic fins, depth 2.6 (2.3) in standard length, caudal peduncle high. Head 2.7 (3.0) in standard length, blunt, profile steep; 3 opercular spines, preopercular serrated, spines enlarged at angle; mouth superior, angle oblique, upper jaw reaching just past mid-orbit. Inner teeth in jaws small, outer row enlarged, canines at front corners of jaws, those of lower jaw larger. Gill rakers $12 + 29 = 41$ ($8 + 27 = 35$), long, length about $2/3$ of orbit. Orbit 3.6 (3.3) in head length, about equal to snout length. Fins: dorsal (1), X, 14 (X,15) spinous and soft dorsal continuous, latter higher, spines provided with membranous flags, origin over pectoral base and insertion on caudal peduncle; caudal fin moderately forked; anal III,7 (III,7); first spine shorter than next 2 which are long, origin below soft dorsal; pectorals moderate, 17; most rays branched; length 1.2 (1.4) in head length; pelvics longer than pectorals, reach first soft anal ray, length 0.9 (0.9) in head length. Lateral line present, follows curve of back to an interruption just before caudal peduncle, continues on middle of side of caudal peduncle to caudal base; $22 + 7 = 29$ (33) pored scales. Scales large, ciliated, covering body, sides and top of head. Vertebrae 26.

Coloration

Our specimen when received was yellow on the back, with a trace of red on some scales, becoming silvery yellow on the abdomen. Two dark yellow stripes on the sides of the head extend to the pectorals; 1 stripe below the eye extends

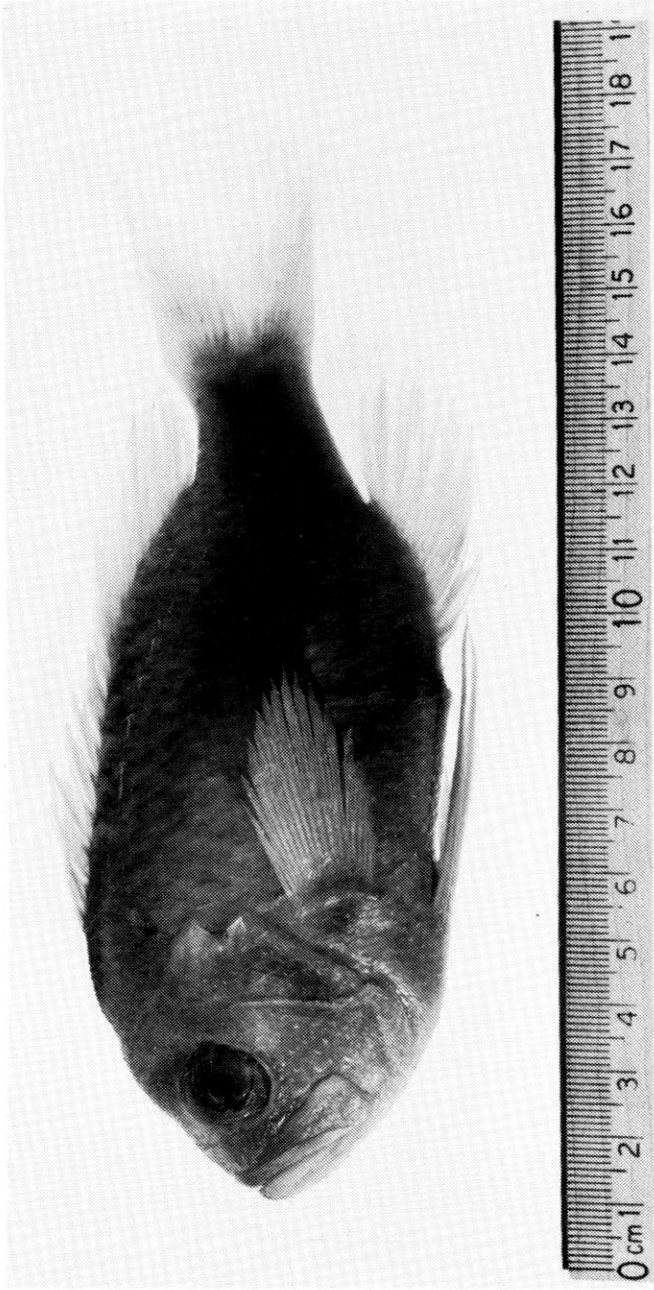


Fig 1. Yellowfin bass, *Anthias nicholsi*, captured by Japanese squid fishermen using a semipelagic bobbin trawl at 190 m, at station 140 on the Scotian Shelf (42°38'N, 64°41'W) at 1355 hrs., 3 July 1980. Neg. File No. 9536.

the entire length of the head, while the other begins just behind the eye. Fins are a darker yellow, with trailing edges of each fin red. This accords with Firth's (1933) type description, except there was a deep blue blotch in the middle of the back below the first dorsal spine; this in formalin turned olive. Also, there were 3 or 4 more-or-less well-defined lengthwise stripes on the body, although a trace of 1 yellow stripe above the lateral line remains in our specimen.

Distinctive Characters

Distinguished from other Canadian serranids by the large scales, moderately elongated body, large eyes and long pelvic fins. Distinguished from other fishes by the 3 opercular spines, large eyes, long pelvics and high interrupted lateral line.

Size

Our specimen, preserved, is 125 mm in standard and 163 mm in total length and weighs 64.8 g. Firth's (1933) type specimen was 150 mm in standard and 191 mm in total length.

Distribution

The yellowfin bass was described from a trawl catch east by south of Chesapeake Light Vessel and from 50 mi (80 km) east-half-north of Cape Henry, Virginia. Subsequently it was reported off Cape May, Ocean City, New Jersey (Fowler 1952). The Scotian Shelf specimen, probably a stray, extends the known range northwards more than 500 km. Canadian distribution: The present specimen was caught south of and between Baccaro and LaHave Banks off southeast Nova Scotia at 42°38'N, 64°41'W in 190 m.

Biology and Economics

The yellowfin bass is apparently a benthic shelf species inhabiting depths of 73 to 190 m. Its canine teeth suggest that it preys on small fishes or invertebrates. Nothing else appears to be known of its life history (Hardy 1978), except that a 21.5-mm larva doubtfully of this genus and species was caught 14 August 1976 on the Scotian Shelf (Markle et al. 1980). The species is not fished by commercial fishermen.

Discussion

Our specimen can be distinguished from the only other American species of *Anthias*, the crimson bass, *Anthias asperilinguis* Günther, by its 29 to 33 instead of 37 pored scales, lack of outer filamentous caudal fin rays and lack of teeth on the tongue.

Our specimen differs modestly from the types in some body proportions (body depth, head length, and orbit diameter) and in number of pored scales, 29 instead of 33, and more trenchantly in 41 instead of 35 gill rakers. Without additional specimens it seems unwise to emphasize these differences. The presence of flags on the dorsal spines of the Scotian Shelf specimen and their absence in the types may be due to differences in maturity or sex. Similar flags on the first dorsal spines are portrayed for *Anthias anthius* (Linnaeus) by Fowler (1936, Fig 341, from Lowe). It therefore appears wisest to identify our specimen with *Anthias nicholsi* Firth.

Acknowledgements

The fish was saved by Fisheries Officer, Peter Clark, an observer on board, and transmitted to the Nova Scotia Museum by Dr. Paul Odense, Halifax Laboratory, Department of Fisheries and Oceans. We are grateful to them for saving this new record for science. Jadwiga Aniskowicz made the radiograph. The photograph in Figure 1 is by Ron Merrick. We thank Vianney Legendre for coining the French common name and for comments on the manuscript.

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