

On the Recent Distribution of two small Cyprinid
Fishes, *Pseudorasbora parva pumila* (Miyadi) and
P. parva parva (Temminck and Schlegel) in
Hokkaido Island, Japan.

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The aim of the present papers is to report the second locality of *Pseudorasbora parva pumila* and to record the recent distribution of *P. parva parva*, within Hokkaido.

Nearly three decades have passed since one of the cyprinid fish, *Pseudorasbora pumila*, was described by Dr. Miyadi (1930), as a local species related to the stone moroco, *Pseudorasbora parva* (Temminck and Schlegel). The first record of the fish in Hokkaido was reported by Sato and Kobayashi (1954), basing on the observation of several samples from a pond in Nezaki near Hakodate city, southernmost of Hokkaido. However, so far as the writer is aware, the fish has never been captured thereafter from any other places in Hokkaido.

Recently, by using a scoop net in two of many old-waterways of the upper Tobetsu stream, a tributary of the Tokachi river, the present writer could get a large number of this species on July 25, 1950. Those other fishes collected at the same time were five species: a common dace (*Tribolodon hakonensis*), a minnow (*Moroco percnurus*), a loach (*Misgurnus anguillicaudatus*), a ninespined stickleback (*Pungitius pungitius*) and a kind of goby (*Rhinogobius brunneus*). A common stream shrimp *Palaemon (palaemon) paucidens* (= *Leander paucidens*) was also collected.

The specimens of *P. parva pumila* examined here are 115 in total number and size range of body length is 2.15 to 6.0 cm. and its peak 4.0 to 4.4 cm, including both sexes. Coloration of the fish in life is blackish dark or darkish brown in male and somewhat light brown in female above, lower side being lead white or pale. The male is generally darker than the female in the external appearance. A dark band running along the side is more conspicuous in female, and is indistinct in male. The scales are large and uniform in size over the body, except in

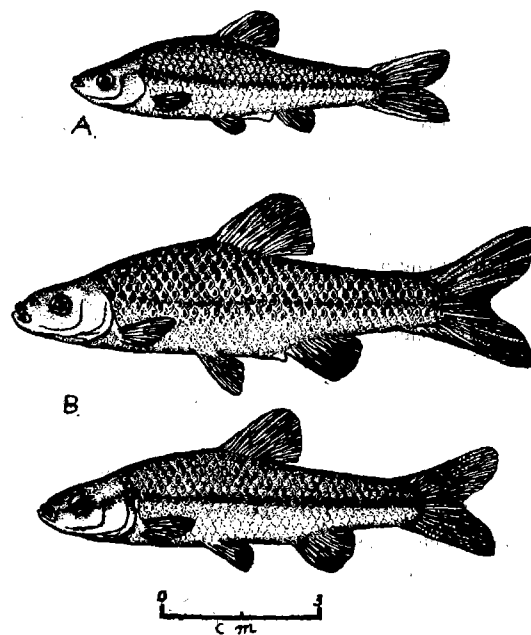


Fig. 1. A. *Pseudorasbora parva pumila*
B. *Pseudorasbora parva parva*
Above: Male, Below: Female

head portion. The lateral line scale is complete, limiting to only anterior portion, with usually 3 to 6 in number (Fig. 1, A).

The writer has undertaken the comparison of various counts and measurements of *P. parva pumila* with those of *P. parva parva* which were collected in the Ogasa river in the vicinity of Fukuoka, northern Kyushu by Dr. K. Uchida and his co-workers in 1959. The results are summarized as follows:

	<i>P. parva pumila</i>	<i>P. parva parva</i>
Dorsal	i-ii, 9-10	i-ii, 10
Pectoral	13-14	12-13
Anal	i, 8	i, 8
Ventral	8	8
Lateral scale series	32-35	35-37
Transverse scale	5-6/3-4	5/3
Gill-rakers	2-3/8-9	3-4/9
Pharyngeal teeth	5-5	5-5
Predorsal scale	15-17 (usually 16)	12-13
Vertebrae	33-34	35-37
Head in standard	3.36-3.70	3.62-4.15
Eye in head	2.50-4.83	3.62-4.00
Interorbital width	2.30-3.83	2.23-2.60
Snout	2.50-3.83	2.90-3.75
Maxillary	2.58-4.50	4.14-5.00
Caudal depth	2.22-2.80	1.88-2.17
Longest dorsal	1.44-2.84	1.00-1.30
Longest pectoral	1.64-2.44	1.44-1.76
Longest anal	2.00-2.86	1.73-2.17
Longest ventral	1.93-2.50	1.53-1.76
Longest Caudal	1.30-1.69	1.13-1.28
Shortest Caudal	2.00-2.90	2.07-2.60
Length from snout to dorsal (in standard)	1.85-2.06	1.75-2.12
Length from snout to pectoral	3.22-3.88	3.00-4.25
Length from snout to anal	1.37-1.53	1.25-1.50
Length from snout to ventral	1.52-2.06	1.75-2.32
Dorsal to caudal base	2.71-3.35	2.39-2.77

In both species, the ranges of measurements of various parts on body are almost overlap or continue in both species, but some differences are clear to occur in the number of lateral line scale, vertebrae and predorsal scale. From the scale reading, *P. parva parva* is superior to *P. parva pumila* in the growth between two related species in the localities. It is probably that this swift growth in the former species depends upon the warmer water temperature of the habitat.

In 1957, Okada and Kubota have described a subspecies *P. parva uchidaii*, as closely related forms of *P. parva parva*. The most remarkable difference of these three species is only a character of lateral line scales, having them in complete on *P. parva parva*, complete only at anterior part on *P. parva pumila* and incomplete on caudal portion on *P. parva uchidaii*.

The scientific name of *P. pumila* seems to be, at present, confused by authors, using either binominal as original or trinominal as a subspecies of *P. parva*. This species can be clearly separated by the number of predorsal scale from *P. parva parva*, but the present writer is here adopted the trinominal

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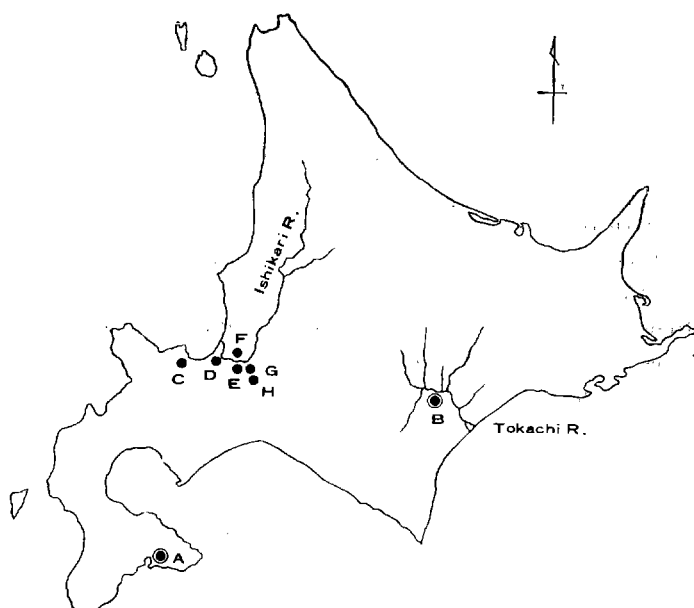


Fig. 2. Map of some localities of two species (*P. parva pumila*, A-B, and *P. parva parva*, (C-H) in Hokkaido: A-Hakodate, B-Tobetsu river, C-Otaru, D-Ishikari river, E-Notsupporo river, F-Shinotsu river, G-Fuhshana, H-Ebetsu river.

nomenclature for the fish, although he has had no chance to examine *P. parva uchidai*.

Recently the writer had a personal communication from Mr. Kondo, with regard to the distribution of a unknown fish inhabited abundantly and propagated in nature in a certain fish-pond at Nagahashi, Otaru city. According to him, the transplanting course to this cultural pond is uncertain, but as the fish culturist is planting the gold fish and carp from Nagano and Gunma Prefectures year after year, the fish may be accidentally transplanted into there. The writer was given an opportunity to examine a sample fish reared in small glass tank of the Otaru Aquarium. From the result of examination this fish has been

identified to *P. parva parva*, with complete lateral line scale number. More recently the writer is found that this species taken commonly from several localities of only Ishikari river basin. These collecting places of the forms is shown in the above map (Fig. 2).

Finally the writer wishes to express his cordial thanks to Emeritus Prof. Dr. K. Uchida of Kyushu University for his kind aid in supplying valuable specimens. Acknowledgement is also due to Mr. K. Kondo of Otaru Aquarium, Mr. M. Sasaki, Dr. T. Kobayashi, Messers. M. Osanai, H. Katanuma of our Hatchery, and H. Hiraiwa, for their kindness of collecting materials.

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北海道におけるモツゴの最近の分布

北海道の淡水魚類については多くの研究者により報告されている。著者も数年来サケ・マス類のほか、道内の淡水魚類の分布、生態の変遷調査を続けているが、ここ数年間の調査で在来北海道に棲息していなかった魚種が、天然に繁殖していることが明らかになった。これら魚類が北海道に侵入して来た原因、経路等については未だ明らかでないが、これらはサケ・マスのように清流を好むものとは異なり、新しい河川、池沼の環境変化に対し適応性が強いいため、道内でも繁殖するようになったものと思われる。

この報告は関東以北、青森県をのぞく東北地方に多数棲息しているシナイモツゴ及び群馬県と新潟県以南の小河川、湖沼に普通にみられるモツゴの、最近の北海道内に於ける分布状況を簡単に取纏めたものである。

シナイモツゴに(*Pseudorasbora parva pumila*)については佐藤・小林(1954)が函館市根崎の池沼で、疋田・寺尾(1959)が十勝川支流途別川の古河で、それぞれ採集しているが、それ以後この魚種の新しい棲息地は知られていない。次にモツゴ(*Pseudorasbora parva parva*)については、疋田(1961)が石狩川下流の古河で採集された数尾について報告した。その後この魚種の分布範囲を知りたいと思っていたところ、各地で採集されていることが逐次明らかになってきた。

今まで釣によつて採集された地域と調査尾数は次の通りである。即ち江別川(10尾)、野津幌川(1尾)、篠津川(1尾)、石狩古河(3尾)、小樽市長橋の金魚養殖池(1尾)及び江別市近郊風車沼(8尾)であつて、この調査結果から考察すると、小樽市を除き、石狩川水系の下流域に流入する各支流、池沼だけに棲息していること、及び上述した小河川、池沼は総て水色が茶褐色で、水流が緩慢であること等が共通している点である。北海道内に於けるこれら2種の分布、生態等については更によく調査する必要があるが、前記の地域では天然に繁殖しており、今後棲息分布範囲が益々広がつてゆくものと考えられる。