

**THE FISHES OF THE LEIOGNATHID GENUS *SECUTOR*,
WITH THE DESCRIPTION OF A NEW SPECIES
FROM THAILAND.**

by

Supap Monkolprasit

INTRODUCTION

The fishes of the Indo-Pacific family Leiognathidae are all characterized by highly protrusible jaws. In *Secutor* when the mouth is fully open the protruded jaws project obliquely upwards, whereas in other members of the family the jaws project either straight ahead (as in *Gazza*, in which the jaw teeth are also much enlarged) or downwards (as in *Leiognathus*). The present paper concerns the species of *Secutor*. Only two species have been recognized, *S. insidiator* and *S. ruconius* (Weber and de Beaufort, 1931; Munro, 1955). Specimens from both the gulf of Thailand and Indian Ocean coast of Thailand include *S. insidiator*, *S. ruconius* and a third species, *S. indicus* described herein.

SYSTEMATICS

SECUTOR

Secutor Gistelle 1848, type species *Zeus insidiator* Bloch 1787, by original designation.

SECUTOR INSIDIATOR (Bloch, 1787)

(Figure 1)

ZEUS INSIDIATOR

Bloch, 1787, *Ausl. Fisch.* III: 41, pl. 192, figs. 2 & 3;
Bloch and Schneider, 1801, *Syst. Ichth.* : 95; Lacépède, 1803, *Hist. Nat. Poiss.* IV:572, 574.

EQUULA INSIDIATRIX

Cuvier and Valenciennes, 1835, *Hist. Nat. Poiss.* X: 98;
Bleeker, 1845, *Nat. Gen. Arch. Ned. Indie* II (3): 518; Cantor, 1850, *Journ. Asiat. Soc. Bengal* XVIII: 1133; Günther, 1860, *Cat. Brit. Mus.* II: 504; Kner, 1865—67, *Novara-Exp. Fische*: 169; Day, 1878-88, *Fish. India*: 242; Weber, 1913, *Siboga-Exp. Fische*: 268.

EQUULA INSIDIATOR

Jordan and Seale, 1905, *Bull. U.S. Bur. Fish.* 25: 33, 1905,
Proc. U.S. Nat. Mus. 28: 777, 1907, *Bull. U.S. Bur. Fish.* 26: 15;
Jordan and Richardson, 1908, *Bull. U.S. Bur. Fish.* 27: 252.

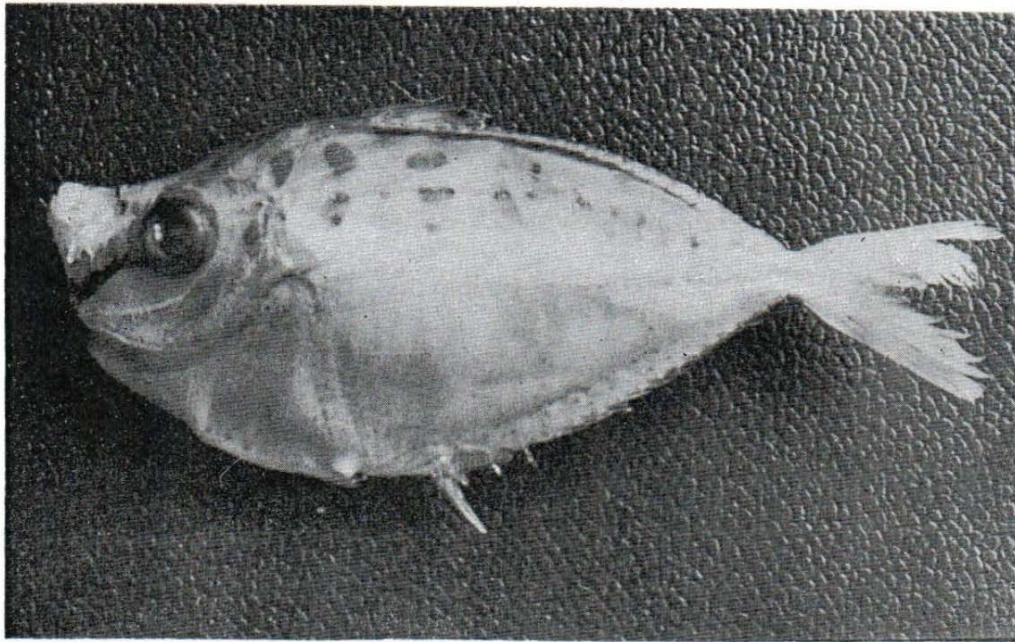


Figure 1 *Secutor insidiator* (Bloch)

LEIOGNATHUS INSIDIATOR

Weber and de Beaufort, 1931, Fish. Indo-Austral. Archip. 6:316;
Suvatti; 1950, Fauna Thailand: 362; Herre, 1953, Check list
Philippines Fishes: 293.

SECUTOR INSIDIATOR

Fowler, 1927, Proc. Acad. Nat. Sci. Philad. 79:273, 1928, Mem. B.P.
Bishop Mus. 10: 154, 1934, Proc. Acad. Nat. Sci. Philad. 86:71, 1935,
Proc. Acad. Nat. Sci. Philad. 87: 144, 1936, Hong Kong Nat., 7 (3 and 4):
307; Smith, 1949, Sea Fish. S. Africa: 243; Munro, 1955, Fish. Ceylon :
145; Scott, 1959, Sea Fish. Malaya: 84; Kuronuma, 1961, A check
List of Fishes of Vietnam: 18.

SECUTOR (or LEIOGNATHUS) INSIDIATOR

Rofen, 1963, Spec. Rep. 1: 63.

D VIII—16; A III—14; P₁ 16—17; P₂ I—5; gill rakers 23—24

Body oblong, very compressed; depth 1.8 to 2.0, head 3.2 to 3.5 both in
standard length; dorsal profile less convex than ventral. Mouth very small, oblique,
when fully protracted tubular and directed upwards, when closed mandible nearly
vertical; maxillary reached to below first third of eye, maxillary to eye 1.2 to 1.5; eye
in head 2.8 to 3.2; interorbital space about equal to diameter of eye; two minute
spines above eye; lower preopercular margin strongly serrated. Scales very small,
deciduous; head naked; lateral line usually reaching to posterior of soft dorsal rays,
about 48—52 in longitudinal series.

Colour: in fresh specimens, silvery with slightly pink and blue on back, paler on sides towards the lateral line; upper one third of depth with 10 to 12 vertical dark blue bands, each band consisting of three to four round or irregular spots descending little beneath lateral line; the rest of body mottled with small black spots; a distinct black line from edge of orbit to chin; opercular with small black spots; a blackish line along base of dorsal; spinous dorsal with black tip; pectoral base yellowish with black spots; fins hyaline; caudal dotted with black.

In preserved specimens, body brownish, vertical blue bands turned to dark brown; black lines and spots remained.

Distribution : China, the Philippines, Gulf of Thailand, Malay Archipelago, Seas of India, East Indies and Tahiti. Marine entering freshwater.

Material examined : KUMF 1385, 6 spec., Songkhla, May 1, 1965; KUMF 1386, 1 spec., Gulf of Thailand, Paknam, December 22, 1923; KUMF 1387, 1 spec., shore at Klong Wan, September 6, 1964; KUMF 1388, 1 spec., Pattalung, April 29, 1965; KUMF 1389, 17 spec., Prachuab Kiri Khan, June 15, 1965; KUMF 1390, 5 spec., Phuket, November 6—20, 1972.

SECUTOR RUCONIUS (Hamilton-Buchanan, 1822)

(Figure 2)

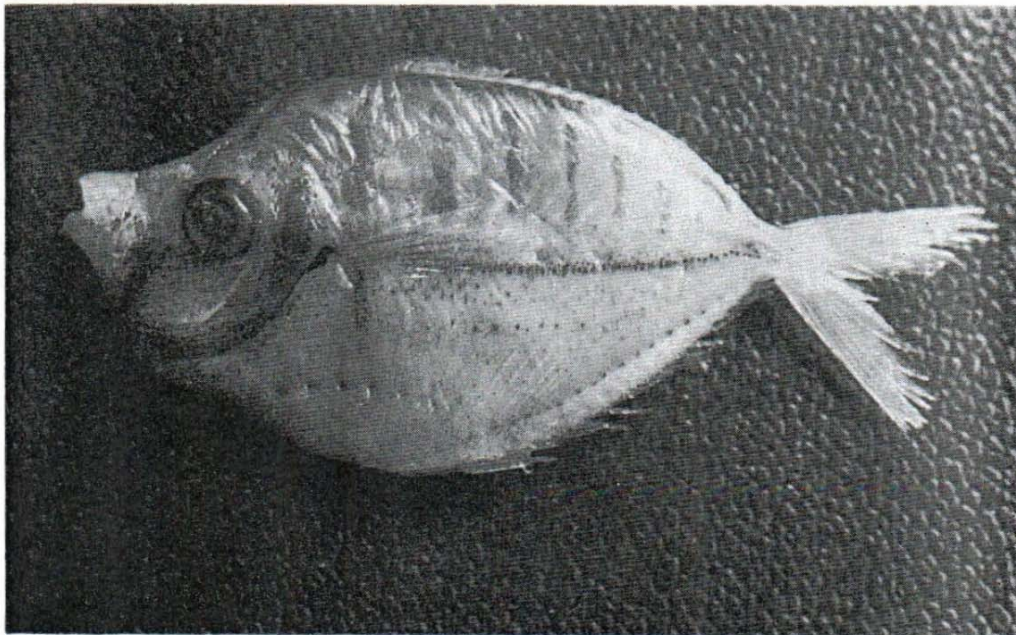


Figure 2 *Secutor ruconius* (Hamilton-Buchanan)

CHANDA RUCONIUS

Hamilton — Buchanan, 1822, Fish. Ganges : 106, 371, pl. 12, fig. 35.

EQUULA RUCONIUS

Cuvier and Valenciennes, 1835, Hist. Nat. Poiss., X: 79; Bleeker, 1859, Enum. Spec. Pisc. Hucusque in Archip. Indico, p. 248; Day, 1878-88, Fish. India : 242, pl. 51 c, fig. 4.

EQUULA INTERRUPTA

Cuvier and Valenciennes, 1835, Hist. Nat. Poiss. X: 102; Günther, 1860, Cat. Brit. Mus. II : 504; Kner, 1865-67, Novara-Exp. Fische : 169.

EQUULA RUCONIA

Jordan and Seale, 1907, Bull. U.S. Bur. Fish. 26 : 15; Seale, 1910, Philipp. Journ. Sci. V: 272.

SECUTOR RUCONIUS

Fowler 1927, Proc. Acad. Nat. Sci. Philad. 79: 273, 1936, Hong Kong Nat. 7 (3 and 4) : 309, 1937, Proc. Acad. Nat. Sci. Philad. 89: 228, 1938, Fish. Malaya : 118, 1939, Proc. Acad. Nat. Sci. Philad. 91: 48; Smith, 1949, Sea Fish. S. Africa : 243; Munro, 1955, Fish. Ceylon : 144; Kuronuma, 1961, Check list of Fish. Vietnam : 18; Marshall, 1964, Fish. Queensland: 241.

LEIOGNATHUS RUCONIUS

Weber and de Beaufort, 1931, Fish. Indo-Austral. Archip. 6: 317, fig. 69; Suvatti 1936, Fish. of Siam : 119, 1950, Fauna of Thailand : 363; Herre, 1953, Check list of Philippine Fishes: 294; Chen, 1960, Quart. Journ. Taiwan Mus. 13 (3 and 4) : 201.

SECUTOR (or LEIOGNATHUS) RUCONIUS

Rofen, 1963, Spec. Rep. 1: 61.

D VIII-16; A III-14; P₁ 16; P₂ I-5; gill rakers 22-24

Body ovate, very compressed; depth 1.5 to 1.8, head 3.0 to 3.2 both in standard length; dorsal and ventral profiles about equal. Mouth very small, oblique, when fully protracted tubular and directed upwards, when closed mandible nearly vertical; maxillary reached to front border of eye, maxillary about equal to diameter of eye; eye in head 2.2 to 2.6, interorbital space 1.2 to 1.5 in eye, one minute spine above eye; lower preopercular margin strongly denticulated. Scales of middle size, deciduous; head naked; lateral line usually reaching to middle of soft dorsal or slightly farther, about 27-32 in longitudinal series.

Colour : in fresh specimens, silvery with slightly pink and blue on back, paler on sides towards the lateral line; upper one third of depth with 8 to 11 silvery blue transverse bands, each band consisting of series of big irregular spots from mid-dorsal profile to mid-lateral region. A distinct black line from edge of orbit to chin; opercular with small black spots; a blackish line along the base of dorsal; spinous dorsal with black tip; small black spots forming a dark mid-line from base of pectoral to caudal peduncle, scattered ones below mid-line; base of pectoral with black; also small spots along base of anal; all fins hyaline, caudal dotted with black.

In preserved specimens, body light brown and transverse blue bands became reddish brown, black lines and spots remained.

Distribution : Tropical Indian ocean, Malay Archipelago, the Philippines, Formosa, China, South through the East Indies to Australia.

Material examined : USNM 151401, 5 spec., P.I. Corregidor, February 9, 1909; USNM 151413, 4 spec., P.I. Manila Bay, December 9, 1907; USNM 151414, 1 spec., P.I. Luzon, Tayabas River, near mouth of river, February 25, 1909, USNM 151415, 1 spec., P.I. Catabato, Mindanao, below mouth of river, May 20, 1908; KUMF 1391, 1 spec., Chantabun river, Lem Sing, July 20, 1928; KUMF 1392, 2 spec. Prachuab Kiri Khan, June 15, 1965; KUMF 1393, 88 spec., Songkhla, May 1, 1965; KUMF 1394; 6 spec., Beach Seine at Klong Wan, June 3, 1964; KUMF 1395, 19 spec., Songkhla, October 28, 1970; KUMF 1396, 87 spec., South China sea, April 10-15, 1972.

SECUTOR INDICIUS New Species

(Figure 3 and 4)

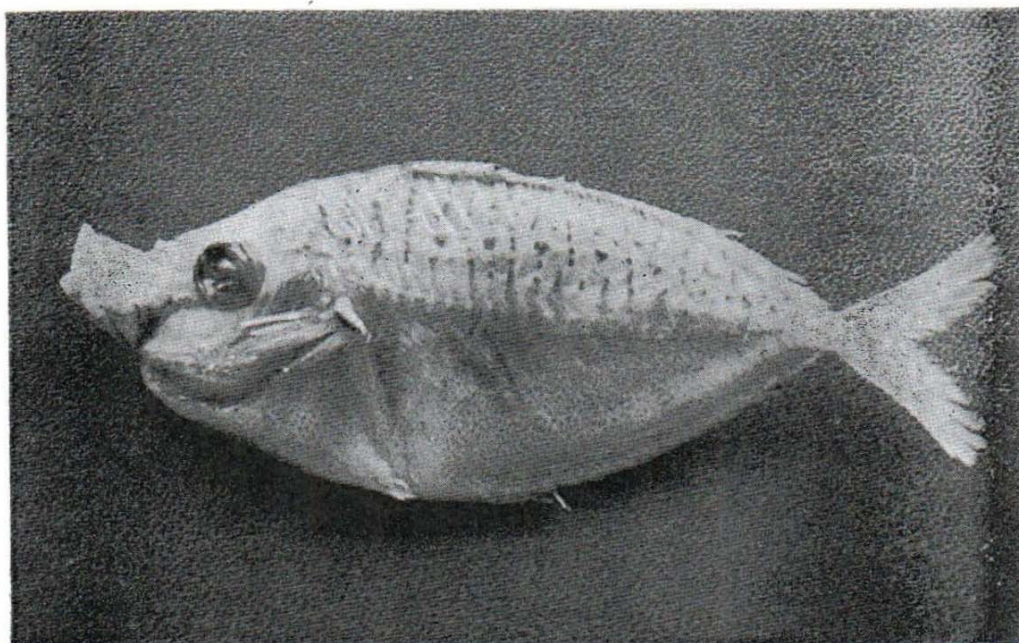


Figure 3 *Secutor indicus* new species

D VIII-16; A III-14; P₁ 17-18; P₂ 1-5; gill rakers 26-29

Body oblong, very compressed, depth 2.2 to 2.6, head 3.4 to 3.7 both in standard length; dorsal and ventral profiles about equal, but in young dorsal more convex. Mouth small, oblique, when fully protracted, tubular and directed upwards, when closed mandible nearly vertical; maxillary, reached just anterior margin of eye,

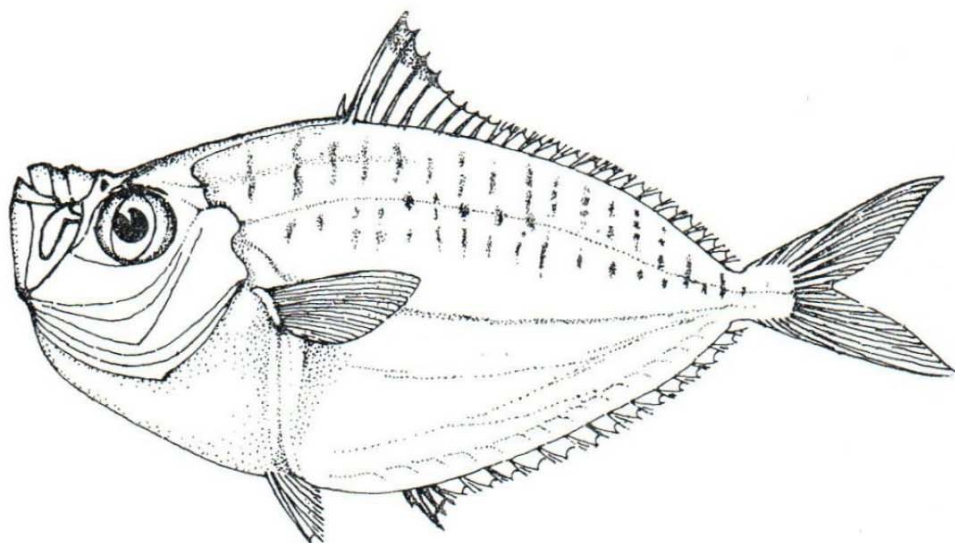


Figure 4 *Secutor indicus* new species

maxillary to eye 1.4 to 1.6; eye in head 2.8 to 3.0; interorbital space concave, 1.2 to 1.3 in eye, more or less equal to snout; supramargin of eye with minute denticulated ridge and anterior of it, one prominent spine situated; lower margin of preopercular with minute denticulate rather stronger than those of supraorbital ridge. Scales very small, easily rubbed; head naked; lateral line lost on below middle or last third of dorsal fin, about 86-92 in longitudinal series.

Colour: in fresh specimens, silvery with light blue on back, paler on sides towards the lateral line; upper one third of depth with 17 to 22 irregular, narrow, broken, vertical series of dark blue bars or series of spots. A narrow black line from edge of orbit to chin; upper part of opercular with many small black spots; a blackish line along the base of dorsal; second to fifth of spinous dorsal with black margin; small black spots forming a dark mid-line from above pectoral base to caudal peduncle, scattered ones below mid-line; base of pectoral with black; all fins hyaline, caudal more or less dusky.

In preserved specimens, body uniform brown, vertical bars became dark brown, black lines and spots remained.

Material examined: KUMF 1369, Holotype, standard length 7.8 cm. Songkhla, May 14, 1965; KUMF 1370, Paratype, 12 specimens, standard length 7.0-8.3 cm., Songkhla, May 14, 1965; KUMF 1371, many, beach seining, depth 5 meters, Klong Wan district, Prachuab Kiri Khan, September 6, 1964; KUMF 1372, 23 specimens, off shore depth 30-40 meters, Prachuab Kiri Khan, May 29, 1965; KUMF 1373, 1 specimen, South China Sea, April 10-15, 1972.

Comparison of three species of *Secutor*

Characters	indicius new species	insidiator	ruconius
D (Dorsal)	VIII—16	VIII—16	VIII—16
A (Anal)	III—14	III—14	III—14
P ₁ (Pectoral)	17—18	16—17	16
P ₂ (Ventral)	I—5	I—5	I—5
Gill rakers	26—29	23—24	22—24
Lateral line scales	86—92	48—52	27—32
Supraorbital spine	1	2	1
Preopercle lower limb	Weakly serrate	Strongly serrate	Strongly serrate
Depth in S.L.	2.2—2.6	1.8—2.0	1.6—1.7
Head in S.L.	3.4—3.7	3.2—3.5	3.0—3.2
Eye in head	2.8—3.0	2.8—3.2	2.2—2.6
Body marking			
dorsolateral bars	Narrow, irregular broken, about 17-22	Ill-formed; about 12 largely replaced by oval or linear blotched on anterior half	Rather regular, broad anteriorly narrow posteriorly, about 12-14
Pigment above anal	Heavily sprinkled with melanophores	Weakly pigmented with few melanophores	Well defined; many melanophores more or less aligned in row

The examined materials at the U.S. National Museum, named under *Secutor insidiator* (Bloch) of which their characters probably agree to *S. indicus* n. sp.

USNM cat. no.	no .of Specimen	Locality	Date	Collectors
102480	2	P.I. Iloilo	April 1, 1929	H.C. Kellers
103005	1	P.I. Iloilo	April 6, 1929	H.C. Kellers
103068	1	P.I. Iloilo	April 1, 1929	H.C. Kellers
139559	7	P.I. Manila- market	Dec. 12—18, 1907	Albatross
139560	5	P.I. Manila- Bay	Dec. 9, 1907	Albatross
139561	3	P.I. Luzon- Pt. Jamelo	July, 12-13, 1908	Albatross
139562	1	P.I. Paluan- Bay	Dec. 11, 1908	Albatross
139563	2	P.I. Cebu- Market	Sept. 4, 1909	Albatross
139568	6	P.I. Catbalogan Samar	April 15, 1908	Albatross

* P.I. = The Philippine Island.

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