

## THE IDENTITY OF *MYSTUS NIGRICEPS* (VALENCIENNES IN CUVIER & VALENCIENNES, 1840), WITH THE DESCRIPTION OF A NEW BAGRID CATFISH (TELEOSTEI: SILURIFORMES) FROM SOUTHEAST ASIA

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**ABSTRACT.** - The identity of *Mystus nigriceps* (Valenciennes, in Cuvier & Valenciennes, 1840) is verified. The species is restricted to Java and southern Sumatra, and the material from throughout central Sumatra, Borneo and the Malay Peninsula previously identified as *M. nigriceps* (or by its junior synonym, *M. micracanthus*) is shown to belong to a previously undescribed species, which is described herein as *Mystus castaneus*, new species. A lectotype is also designated for *Bagrus keletius* (Valenciennes, in Cuvier & Valenciennes, 1840).

**KEY WORDS.** - *Mystus*, Java, new species, Bagridae.

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### INTRODUCTION

*Mystus* Scopoli, 1777 (or *Macrones* as used by earlier authors; *Macrones* Duméril, 1856 is preoccupied by *Macrones* Newman, 1841 in Coleoptera and *Mystus* Scopoli, 1777 was revived by Fowler (1928) as a replacement name) is a poorly defined genus of relatively generalised Asian bagrid catfishes that has been demonstrated to be polyphyletic (Mo, 1991). The exact identity of *Mystus nigriceps* (Valenciennes, in Cuvier & Valenciennes, 1840), a species found throughout Sundaic Southeast Asia, has been unclear until recently. Most authors since Günther (1864) have used the name *M. nigriceps* for a species of *Mystus* with a long adipose-fin base currently identified as *M. singaringan* (Bleeker, 1846), until Roberts (1993) determined that the original description of *M. nigriceps* is based on material collected from Java by Kuhl and van Hasselt of the species usually identified as *Mystus micracanthus* (Bleeker, 1846) (see also Roberts, 1994 for a discussion of the identity of *M. singaringan*).

A detailed examination of *M. nigriceps* from throughout its distribution reveals that there are distinct differences between the populations from Java and southern Sumatra and the rest of Southeast Asia. These differences are distinct enough for the

two populations to be considered distinct species. Since the population from the rest of Sundaic Southeast Asia is currently without a name, it is described here as *Mystus castaneus*, new species. Because of the confusion surrounding the identity of *M. nigriceps*, the species is also redescribed.

### MATERIALS AND METHODS

Measurements were made point to point with dial callipers and data recorded to tenths of a millimetre. Counts and measurements were made on the left side of specimens whenever possible. Subunits of the head are presented as proportions of head length (HL). Head length itself and measurements of body parts are given as proportions of standard length (SL). Measurements and counts were made following Ng & Dodson (1999).

Fin rays were counted under a binocular dissecting microscope using transmitted light. Vertebral counts were taken from radiographs following the method of Roberts (1994). Numbers in parentheses following a particular fin-ray, branchiostegal-ray, gill-raker or vertebral count indicate the number of specimens with that count. Drawings of the specimens were made with a Nikon SMZ-10

microscope and camera lucida. Institutional abbreviations follow Eschmeyer (1998).

## TAXONOMY

### *Mystus nigriceps* (Valenciennes in Cuvier & Valenciennes, 1840)

(Fig. 1)

*Bagrus nigriceps* Valenciennes in Cuvier & Valenciennes, 1840: 412 (type locality: Java).

*Bagrus keletius* Valenciennes in Cuvier & Valenciennes, 1840: 411 (in part; type locality: Java & Pondicherry, India)

*Bagrus micracanthus* Bleeker, 1846a: 151 (type locality: Batavia); 1846b: 285; 1847: 6; 1850: 10; 1854b: 469; 1854c: 483; 1854d: 483; 1855b: 392, 395; 1857b: 476; 1858b: 161 (in part); 1858c: 417; 1858-59b: 242; 1858-59d: 357; 1860d: 100.

*Hypselobagrus micracanthus* - Bleeker, 1862: 59, pl. 74 fig. 3 (in part).

*Macrones micracanthus* - Reuvens, 1894: 176; Weber & de Beaufort, 1913: 339 (in part).

*Mystus micracanthus* - Kottelat et al., 1993: 66, pl. 31 (in part).

*Mystus nigriceps* - Roberts, 1993: 29. Fig. 64.

**Material examined.** - Holotype - RMNH 2948, 119.3 mm SL; Java.

Others - RMNH 3009, 199, 99.4 mm SL; Java. - RMNH 15857, 105.3 mm SL; Java: Batavia (neotype of *Bagrus micracanthus*). - MNHN 4369, 71.5 mm SL; Java (paralectotype of *Bagrus keletius*; photograph examined). - CMK 9214, 7 ex., 63.9-77.0 mm SL; Java: Java Timur, Kali Brantas basin, canal at Nggareman (Kecamatan Patianrowo, Kabupaten Kertosono) (7°34'S 112°5'E). - CMK 9231, 8 ex., 57.0-84.4 mm SL; Java: Java Timur,

Kali Brantas basin, channelized stream through drained (formerly swampy) area at Campurdarat, S of Tulungagung (8°10'S 111°20'E). - MZB 12, 1 ex., 82.1 mm SL; Java: Batavia. - MZB 10032, 2 ex., 78.1-79.5 mm SL; Java: Java Timur, Kabupaten Bojonegoro, Kecamatan Bojonegoro, Desa Bojonegoro, Bengawan Solo. - MZB 10056, 10 ex., 56.1-86.1 mm SL; Java: Java Timur, Brantas River, Lengkong Dam at Mojokerto. - MZB 10066, 4 ex., 77.6-110.5 mm SL; Java: Ciujung River, Kecamatan Pamarayan Serang. - MZB 10259, 2 ex., 51.6-71.0 mm SL; Sumatra: Lampung Timur, Kabupaten Sekampong Ubik, Desa Bojong, Sungai Kemali, tributary of Sungai Sekumpang. - ZMA 121.814, 1 ex., 78.6 mm SL; Java: Katring. - ZMA 121.859, 2 ex., 79.9-81.2 mm SL; Java: Opak River near Kritek. - ZRC 43878, 4 ex., 66.4-79.3 mm SL; Java: Java Tengah, Citalahab next to rice field, probably draining into Citanduy about 20 km to Banjar.

**Diagnosis.** - *Mystus nigriceps* can be distinguished from its congeners by the unique combination of the following characters: body depth at anus 16.3-20.7, adipose maximum height 4.1-6.0, nasal barbel length 43.6-73.9, maxillary barbel length 282.2-383.3, inner mandibular barbel length 64.9-102.4, outer mandibular barbel length 103.0-160.0, second and third dorsal fin rays not much longer than other dorsal rays, causing dorsal fin to appear somewhat rounded, greenish grey colour with a diffuse dark triangular marking on base of caudal peduncle, and a gently sloping head profile when viewed laterally.

**Description.** - Head and body moderately compressed. Dorsal profile rising evenly but not steeply from tip of snout to origin of dorsal fin, then sloping gently ventrally from there to end of caudal peduncle. Ventral profile horizontal to origin of anal, then sloping dorsally to end of caudal peduncle. In % SL: head length 24.9-28.9, head width 15.9-20.1, head depth

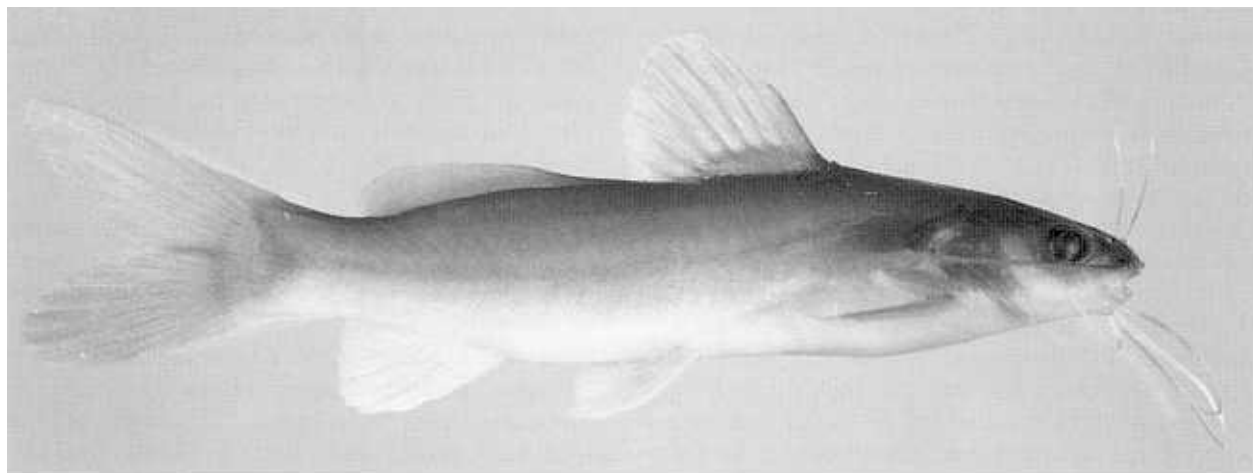


Fig. *Mystus nigriceps*, CMK 9231, 74.9 mm SL; Java: Brantas basin. Photo courtesy of M. Kottelat.

14.3-17.4, predorsal distance 35.9-39.1, preanal length 69.1-74.8, prepelvic length 50.8-54.1, prepectoral length 21.1-25.1, body depth at anus 16.3-20.7, length of caudal peduncle 16.7-19.2, depth of caudal peduncle 9.0-11.5, pectoral-spine length 13.9-17.0, pectoral-fin length 16.1-19.5, dorsal-spine length 9.8-10.7, length of dorsal-fin base 14.5-16.5, pelvic-fin length 13.4-16.7, length of anal-fin base 11.0-14.8, caudal-fin length 28.1-34.1, length of adipose-fin base 26.3-31.4, adipose maximum height 4.1-6.0, post-adipose distance 12.3-15.1; in % HL: snout length 33.2-36.5, interorbital distance 33.2-38.6, eye diameter 16.4-22.4, nasal barbel length 43.6-73.9, maxillary barbel length 282.2-383.3, inner mandibular barbel length 64.9-102.4, outer mandibular barbel length 103.0-160.0. Branchiostegal rays 8 (5) or 9 (1). Gill rakers 5+22 (1), 6+21 (1), 6+22 (1), 7+21 (1). Vertebrae 21+18=39 (1), 22+17=39 (2) or 22+18=40 (1).

Fin ray counts: dorsal I,7 (12); pectoral I,9 (11) or I,10 (1); pelvic i,5 (12); anal iv,8 (1) or iv,9 (11); caudal 8/9 (12). Dorsal origin nearer tip of snout than caudal flexure. Dorsal spine stout, with 3-4 small serrae on posterior edge. Pectoral spine stout, with 10-14 serrae on posterior edge. Anal origin slightly posterior to adipose origin. Depressed dorsal not reaching adipose fin. Caudal fin forked; upper and lower lobe rounded posteriorly.

**Colour.** - Dorsal surface of head and body greenish grey, with a diffuse grey triangular mark on base of caudal peduncle, ventral surfaces of head and body dirty white; adipose fin and fin rays of all fins greenish grey; inter-radial membranes of all fins with scattered melanophores.

**Habitat.** - *Mystus nigriceps* is found in large, slow-flowing rivers with turbid water and muddy substrate.

**Distribution.** - Only known from drainages in Java (Bengawan Solo, Cimanuk, Citanduy, Ciujung, Kali Brantas) and southern Sumatra (Sekumpang).

***Mystus castaneus*, new species**

(Fig. 2)

*Bagrus micracanthus* - Bleeker, 1852: 413; 1853: 428; 1854a: 65; 1855a: 260; 1857a: 9; 1858a: 25; 1858b: 161 (in part); 1858-59a: 210; 1858-59c: 274; 1860a: 18; 1860b: 18; 1860c: 46 (non Bleeker, 1846).

*Hypselobagrus micracanthus* - Bleeker, 1862: 59, pl. 74 fig. 3 (in part); Fowler, 1904: 500 (non Bleeker, 1846).

*Macrones micracanthus* - Günther, 1864: 76; Steindachner, 1901: 446; Volz, 1907: 165; Weber & de Beaufort, 1913: 339 (in part); Hardenberg, 1931: 117; 1934: 306; Tweedie, 1936: 19 (non Bleeker, 1846).

*Mystus micracanthus* - Fowler, 1934a: 94; 1934b: 337; 1937: 146; 1938: 249; 1939: 43; Herre & Myers, 1937: 69; Hora & Gupta, 1941: 26; Smith, 1945: 391; Imaki et al., 1981: 41, fig. 80; Zakaria-Ismail, 1984: 25; 1987: 408; Kottelat, 1989: 14; Roberts, 1989: 120 (in part); Kottelat et al., 1992: 10; 1993: 66, pl. 31 (in part); Lim et al., 1993: 6; Kottelat & Lim, 1995: 239; Rainboth, 1996: 142; Vidthayanon et al., 1997: 43 (non Bleeker, 1846).

*Mystus nigriceps* - Hora & Gupta, 1941: 27 (in part); Ng & Tan, 1999: 357; Tan & Ng, 2000: 278 (non Valenciennes, in Cuvier & Valenciennes, 1840).

**Material examined.** - Holotype - ZRC 41848, 1 ex., 121.4 mm SL; Borneo: Sarawak, Serian market, from Sungai Sadong; H. H. Tan et al., 29-31 Oct.1997.

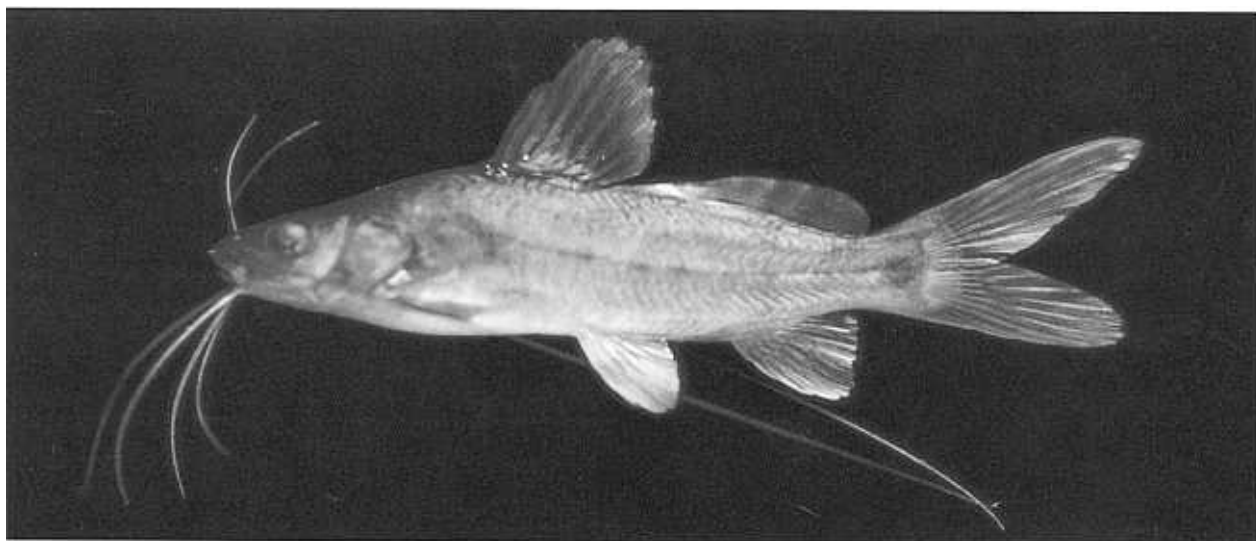


Fig. 2. *Mystus castaneus*, CMK 10499, paratype, 100.2 mm SL; Borneo: Kapuas basin. Photo courtesy of M. Kottelat.

Paratypes - BORNEO: CMK 6914, 4 ex., 46.3-102.9 mm SL; Kalimantan Barat: Kapuas basin, right tributary of Sungai Sibul, about 3 km upstream of Putussibau; 0°51'N 112°51'E; M. Kottelat et al., 28 Apr.1990. - CMK 10087, 24 ex., 30.3-90.9 mm SL; Kalimantan Barat: Kapuas basin, Sungai Genali (tributary of Sungai Belitung) and a small forest stream entering it near Nanga Sekulat; 0°40'53"N 112°09'05"E; M. Kottelat et al., 4 Sep.1993. - CMK 10347, 1 ex., 88.7 mm SL; Kalimantan Barat: Kapuas basin, Sungai Tawang near Nanga Kenelang. M. Kottelat et al., 10 Sep.1993. - CMK 10499, 3 ex., 66.7-100.2 mm SL; Kalimantan Barat: Sungai Tawang near Nanga Kenelang; M. Kottelat et al., 13 Sep. 1993. - FMNH 62997, 1 ex., 121.4 mm SL; Sarawak: Fourth Division, Niah, Kuala Tangap to Kuala Subis; Lord Medway, 20 Aug.1959. - FMNH 63027, 1 ex., 122.0 mm SL; Sarawak: Fourth Division, Niah, Sungai Subis; Lord Medway, 18 Aug.1959. - FMNH 68567, 1 ex., 129.0 mm SL; Sarawak: Fourth Division, Niah, Sungai Subis; T. Harrisson & G. Sureng, 23 Mar.1960. - FMNH 68744, 1 ex., 106.6 mm SL; Sarawak: Fourth Division, Niah, Tangap; T. Harrisson, 22 Nov.1960. - FMNH 68747, 2 ex., 104.3-106.0 mm SL; Sarawak: Fourth Division, Niah; G. Sureng, 20 Apr.1960. - FMNH 68748, 1 ex., 128.3 mm SL; Sarawak: Fourth Division, Niah, Sekaloh; G. Sureng, 26 Apr.1960. - FMNH 68749, 1 ex., 146.8 mm SL; Sarawak: Fourth Division, Niah, Sungai Tangap; L. Chin, 20 Sep.1960. - FMNH 68750, 1 ex., 105.2 mm SL; Sarawak: Fourth Division, Niah, Sungai Subis; L. Chin, 22 Sep.1960. - FMNH 68568, 2 ex., 120.4-123.3 mm SL; Sarawak: Fourth Division, Niah, Subis; T. Harrisson & G. Sureng, 23 Mar.1960. - FMNH 68746, 2 ex., 102.0-113.1 mm SL; Sarawak: Fourth Division, Niah; G. Sureng, 16 Apr.1960. - FMNH 69890, 1 ex., 108.5 mm SL; Sarawak: Fourth Division, Niah; T. Harrisson, 1960. - ZRC 25997, 1 ex., 129.8 mm SL; Sarawak: 99 km from Kuching, Sungai Jaguh after Balai Ringin; P. K. L. Ng & C. Leh, 2 Jul.1992. - ZRC 38003, 6 ex., 78.7-121.3 mm SL; Sarawak: Marudi market; M. Kottelat & T. Tan, 18-20 Jun.1994. - ZRC 39419, 3 ex., 124.0-134.5 mm SL; Sarawak: Serian market; H. H. Tan et al., 5 Sep.1995. - ZRC 40487, 8 ex., 86.5-114.1 mm SL; Brunei: Tutong district, Sungai Merimbun, outflow from Tasik Merimbun draining into Sungai Tutong; H. H. Tan et al., 16-17 May.1996. - ZRC 41854, 1 ex., 91.0 mm SL; Sarawak: Balai Ringin, stall near bridge at Sungai Kerang; H. H. Tan et al., 29 Oct.1997. - ZRC 42670, 2 ex., 115.0-119.0 mm SL; Brunei: Belait district, Sungai Melilas in front of Kampung Melilas, tributary of Sungai Belait; H. H. Tan et al., 8 May.1996.

MALAY PENINSULA: ZRC 3231, 1 ex., 133.8 mm SL; Malaysia: Pahang, Kuala Tahan, Paya Sumpur; D. S. Johnson, 5 Mar.1961. - ZRC 27672, 1 ex., 122.8 mm SL; Malaysia: Selangor, Sungai Bernam headworks; P. K. L. Ng et al., 19 Sep.1992. - ZRC 28176, 1 ex., 77.6 mm SL; Malaysia: Johor, Kota Tinggi, Sungai Mupor; P. K. L. Ng & K. Lim, 15 Oct.1992. - ZRC 38408, 1 ex., 93.9 mm SL; Malaysia: Perak, Krian, stream flowing out of Bukit Merah reservoir; H. H. Tan et al., 21 Dec.1994. - ZRC 43728, 1 ex., 71.9 mm SL; Thailand: Narathiwat province, Bac Sac, tributary of Mae Nam Sungai Kolok ca. 19.5 km W to Waeng at junction from Sungai Kolok to Waeng and Sungai Padi; H. H. Tan et al., 23 Oct.1998.

SUMATRA: ZMA 119.059, 1 ex., 116.2 mm SL; Indragiri River at Taluk; J. P. Kleiweg de Zwaan, 1907. - ZMA 119.060, 7 ex., 71.1-96.9 mm SL; Batang Hari at Jambi; P. E. Moolenburgh, 1909. - ZRC 42310, 1 ex., 40.7 mm SL; Jambi: Sungai Alai at 19.5 km Muara Bungo-Muara Tebo road, 1°28'42"S 102°18'31"E; H. H. Tan et al., 22 Jul.1997.

Others - BORNEO: CAS 49376, 2 ex., 65.1-72.3 mm SL; Kalimantan Barat: fish market at Sintang. - CAS 49377, 2 ex., 72.3-83.4 mm SL; Kalimantan Barat: small forested stream where it flows into Sungai Mandai, 2-3 km upstream from its confluence with Kapuas mainstream, 17 km WSW of Putussibau. - CAS 89063, 6 ex., 44.2-73.7 mm SL; Kalimantan Barat: several forest streams where they flow into Kapuas mainstream within 10 km upstream from Sanggau. - FMNH 68745, 1 ex., 79.0 mm SL; Sarawak: Fourth Division, Niah, Kampung Tangap. - FMNH 94238, 3 ex., 66.4-73.1 mm SL; Kalimantan Barat: Danau Piam near Ketungau, 38 km NNE of Sintang. - UMMZ 209926, 2 ex., 48.2-52.7 mm SL; Kalimantan Barat: small forest stream about 1 km up Sungai Tajan, 87 km E of Pontianak. - ZRC 9246, 1 ex., 64.6 mm SL; Sarawak: Sungai Tapah at Long Lama. - ZRC 38784, 10 ex., 39.6-47.5 mm SL; Kalimantan Barat: Sungai Letang near Kampung Kandung Suli. - ZRC 39517, 1 ex., 87.0 mm SL; ZRC 40490, 6 ex., 92.7-143.8 mm SL; Sarawak: Serian market. - ZRC 40513, 2 ex., 107.0-111.3 mm SL; Sarawak: Marudi market, from Baram River. - ZRC 46075, 3 ex., 110.4-125.0 mm SL; Sarawak: Miri, Kampung Bakong, from Sungai Bakong, turnoff after km 62 to Batu Niah. - ZRC 40492, 1 ex., 99.5 mm SL; Brunei: Tutong district, Tasik Merimbun.

MALAY PENINSULA: CAS 53308, 1 ex., 113.5 mm SL; CAS 130987, 1 ex., 67.0 mm SL; Singapore. - CAS 94765, 1 ex., 38.0 mm SL; Thailand: Mae Nam Patani, mainstream and tributary 35 km by road N of Betong on highway 410. - CAS 94873, 13 ex., 32.5-49.2 mm SL; Thailand: Trang province, Palian district, small canal in rubber plantation about 30 km S of Trang. - CAS 130985, 1 ex., 56.8 mm SL; Malaysia: Malacca, Jasin, outlet of Lake Chin Chin. - CAS 130986, 1 ex., 70.9 mm SL; Malaysia: Johor, Mawai district. - CAS 130988, 1 ex., 130.6 mm SL; Malaysia: Perak, Telok Anson. - CAS 132715, 1 ex., 105.1 mm SL; Malaysia: Johor, Sungai Kayu. - ZRC 2422, 1 ex., 69.6 mm SL; Malaysia: Kedah, Baling - ZRC 2428, 2 ex., 144.7-147.4 mm SL; Malaysia: Perak, Bukit Merah Reservoir. - ZRC 2429, 2 ex., 127.0-138.6 mm SL; Malaysia: Johor. - ZRC 2430, 2 ex., 62.9-103.6 mm SL; Malaysia: Perlis, Kaki Bukit. - ZRC 11461, 1 ex., 110.1 mm SL; Malaysia: Johor, Kulai. - ZRC 32408-32411, 4 ex., 47.0-62.6 mm SL; Malaysia: Johor, km 8 Kluang-Mersing road. - ZRC 40795, 15 ex., 21.5-33.2 mm SL; Thailand: Chantaburi province, downstream of Nam Tok Phliu (waterfall) (12°31'14.0"N 102°10'36.1"E).

SUMATRA: CAS 108014, 1 ex., 104.9 mm SL; Padang. - UMMZ 155689, 1 ex., 101.9 mm SL; UMMZ 155713, 1 ex., 58.7 mm SL; UMMZ 155714, 6 ex., 38.8-87.8 mm SL; Moesi River, Mocara Klingi. ZRC 39182, 1 ex., 46.4 mm SL; Jambi: Sungai Alai at 19.5 km Muara Bungo-Muara Tebo road.

**Diagnosis.** - *Mystus castaneus* can be distinguished from its congeners by the unique combination of the following characters: body depth at anus 20.7-24.6, adipose maximum height 6.1-7.0, nasal barbel length 70.3-99.6, maxillary barbel length 372.3-478.8, inner mandibular barbel length 92.1-122.3, outer mandibular barbel length 174.0-219.0, second and third dorsal fin rays much longer than other dorsal rays, causing dorsal fin to appear somewhat triangular, brown colour with a well-defined dark triangular marking on base of caudal peduncle, and a steeply sloping head profile when viewed laterally.

**Description.** - Head and body moderately compressed. Dorsal profile rising evenly but not steeply from tip of snout to origin of dorsal fin, then sloping gently ventrally from there to end of caudal peduncle. Ventral profile horizontal to origin of anal, then sloping dorsally to end of caudal peduncle. In % SL: head length 26.0-29.3, head width 17.7-19.9, head depth 15.9-19.6, predorsal distance 36.5-41.9, preanal length 68.6-72.7, prepelvic length 48.7-53.8, prepectoral length 22.1-26.3, body depth at anus 20.7-24.6, length of caudal peduncle 16.9-19.6, depth of caudal peduncle 9.3-10.9, pectoral-spine length 18.5-21.8, pectoral-fin length 20.3--24.1, dorsal-spine length 10.5-14.4, length of dorsal-fin base 14.5-18.7, pelvic-fin length 16.1-18.7, length of anal-fin base 11.2-14.4, caudal-fin length 28.6-35.2, length of adipose-fin base 29.0-36.7, adipose maximum height 6.1-7.0, post-adipose distance 12.7-15.7; in % HL: snout length 34.2-39.8, interorbital distance 34.9-40.9, eye diameter 17.7-21.6, nasal barbel length 70.3-99.6, maxillary barbel length 372.3-478.8, inner mandibular barbel length 92.1-122.3, outer mandibular barbel length 174.0-219.0. Branchiostegal rays 8 (18) or 9 (6). Gill rakers 5+17 (1), 5+19 (1), 6+20 (1). Vertebrae 20+18=38 (5), 20+19=39 (1), 21+17=39 (3), 21+18=39 (13), 22+17=39 (1), 22+18=40 (1) or 22+19=41 (1).

Fin ray counts: dorsal I,7 (24); pectoral I,9 (22) or I,10 (2); pelvic i,5 (24); anal iv,8 (2) or iv,9 (22); caudal 8/9 (24). Dorsal origin nearer tip of snout than caudal flexure. Dorsal spine stout, with 3-9 small serrae on posterior edge. Pectoral spine stout, with 10-16 serrae on posterior edge. Anal origin slightly posterior to adipose origin. Depressed dorsal not reaching adipose fin. Caudal fin forked; upper and lower lobe rounded posteriorly.

**Colour.** - Dorsal surface of head and body uniform brown, with a well-defined dark triangular marking on base of caudal peduncle; ventral surfaces of head and body cream; adipose fin and fin rays of all fins

brown; inter-radial membranes of all fins with scattered melanophores.

**Habitat.** - *Mystus castaneus* is found in forested streams, sometimes with turbid water and always with a leaf-litter substrate.

**Distribution.** - Known from drainages throughout central Sumatra (Musi, Batang Hari, Indragiri), the Malay Peninsula (Bernam, Endau, Johor, Pahang, Perak, Pattani, Sungai Kolok, Trang), southeastern Thailand (Klong Krabi), and Borneo (Baram, Belait, Kapuas, Rejang, Sadong). Desoutter (1975) records this species from the Tonlé Sap (part of the Mekong drainage) in Cambodia, but this is most probably due to a misidentification, as the species is not known from the Mekong River drainage.

**Etymology.** - From the Latin *castaneus*, meaning chestnut brown; in reference to the colour of this species. An adjective.

## DISCUSSION

As mentioned earlier, the name *Mystus nigriceps* has been used for the species currently identified as *Mystus singaringan* (Bleeker, 1846). At the same time, the name *Mystus micracanthus* (Bleeker, 1846) was used for a species with a brown coloration and a black triangular mark at the base of the caudal peduncle commonly found throughout Sundaic Southeast Asia (except Java). Roberts (1993) showed that the original description of *M. nigriceps* is based on material collected from Java by Kuhl and van Hasselt of the species which he thought to be identical with the one usually identified as *Mystus micracanthus*. As mentioned previously, *M. nigriceps* s. str. is found only in Java and southern Sumatra. Specimens from the rest of Sundaic Southeast Asia previously thought to be conspecific with *M. nigriceps* are shown here to belong to a distinct species, *M. castaneus*, new species.

*Bagrus keletius* Valenciennes in Cuvier & Valenciennes, 1840 was described from material from Pondicherry, India and Java, and an examination of the syntypes shows that they represent two distinct species (see also Roberts, 1993). The Javanese material is conspecific with *M. nigriceps* and the Indian material is reported to resemble *M. gulio* (see Roberts, 1993). However, the size and shape of the adipose fin (it has a longer base than that of *M. gulio*) seems to suggest that it is either *M. armatus* or *M. vittatus* instead. In any case, the Indian syntype clearly differs from Javanese material in having only 35 (vs. 38 or more) vertebrae. To avoid

any potential nomenclatural problems, the specimen from Pondicherry (MNHN A.9011, 82.8 mm SL) is hereby designated as the lectotype of *Bagrus keletius*.

Dutt et al. (1982) synonymised *M. nigriceps* with *M. cavasius*. However, they list the holotype of *M. nigriceps* as RMNH 2953, which is a specimen of *M. singaringan* of ca. 76 mm SL (ca. 99 mm TL) collected by Kuhl and van Hasselt from Java. This specimen could not have been the holotype of *M. nigriceps* because it is too small: the original description of *M. nigriceps* was based on a specimen of 5 Parisian inches (135.3 mm) TL.

The neotype designations for *Bagrus micracanthus* (RMNH 15857, 105.3 mm SL) and *B. nigriceps* (RMNH 3009, 99.4 mm SL) (Roberts, 1989 and 1993 respectively) are invalid under Article 75 of the International Code of Zoological Nomenclature (International Commission on Zoological Nomenclature, 1999). *Bagrus micracanthus* was described from an unknown number of specimens of unknown size while Bleeker was still stationed in Batavia (Bleeker, 1846). His subsequent transfer to Samarang meant that he had to leave many of his specimens behind (Bleeker, 1878), which eventually led to the loss of some of this material (Boeseman, 1973). Although this problem with Bleeker material is well known (e.g. see Ng et al., 1999 for a detailed discussion), there is no doubt about the identity of *Bagrus micracanthus*, since there are no other species from the type locality (Batavia=present day Jakarta) that resembles it in any way. Hence, the neotype designation for *Bagrus micracanthus* is unnecessary, in accordance to Article 75.2 of the International Code of Zoological Nomenclature. Likewise, the neotype for *B. nigriceps* designated in Roberts (1993) is not valid, since the original description was based on a specimen of about 135.3 mm TL, and among all of the specimens collected by Kuhl and van Hasselt, RMNH 2948 (119.3 mm SL; ca. 130 mm TL) agrees very closely with the measurement of the holotype as given by Valenciennes in the original description. Therefore, RMNH 2948 is here identified as the holotype of *Bagrus nigriceps*, thus invalidating the neotype designation of Roberts (1993).

Bleeker (1862) placed *M. nigriceps* (as *Bagrus micracanthus*) in a distinct genus, *Hypselobagrus*, but its validity cannot be determined without a detailed systematic analysis of the genus *Mystus* as currently understood. I therefore tentatively retain *M. nigriceps* and the apparently closely related *M. castaneus* in *Mystus* pending such a study.

*Mystus castaneus* closely resembles *M. nigriceps*, and previous workers have considered the two species conspecific (see Introduction). The two species differ in *M. castaneus* having a deeper body (body depth at anus 20.7-24.6 % SL vs. 16.3-20.7) and adipose fin (adipose maximum height 6.1-7.0 % SL vs. 4.1-6.0), and longer barbels (nasal barbel length 70.3-99.6 % HL vs. 43.6-73.9, maxillary barbel length 372.3-478.8 % HL vs. 282.2-383.3, inner mandibular barbel length 92.1-122.3 % HL vs. 64.9-102.4, outer mandibular barbel length 174.0-219.0 % HL vs. 103.0-160.0). The second and third dorsal-fin rays are longer in *M. castaneus*, causing the dorsal fin to appear less rounded (Figs. 1 and 2), and the head profile of *M. nigriceps*, when viewed laterally, is more gently sloping (Figs. 1 and 2). The coloration of the two species also differ: *M. nigriceps* is greenish grey, with a diffuse dark triangular marking on the base of the caudal peduncle while *M. castaneus* is brown, with a well-defined dark triangular marking on the base of the caudal peduncle.

Roberts (1989) reported on intraspecific variation of the numbers of gill rakers on the first gill arch and vertebrae of *M. castaneus*, noting that specimens from Sumatra and the Malay Peninsula had fewer gill rakers and more vertebrae, while those from Borneo had more gill rakers and fewer vertebrae. After a detailed examination of specimens of *M. castaneus* from throughout its range, I was unable to find further differences separating the populations from Sumatra and the Malay Peninsula with those from Borneo. I therefore consider the two populations conspecific here.

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