



Oxyeleotris marmorata (Bleeker, 1852)

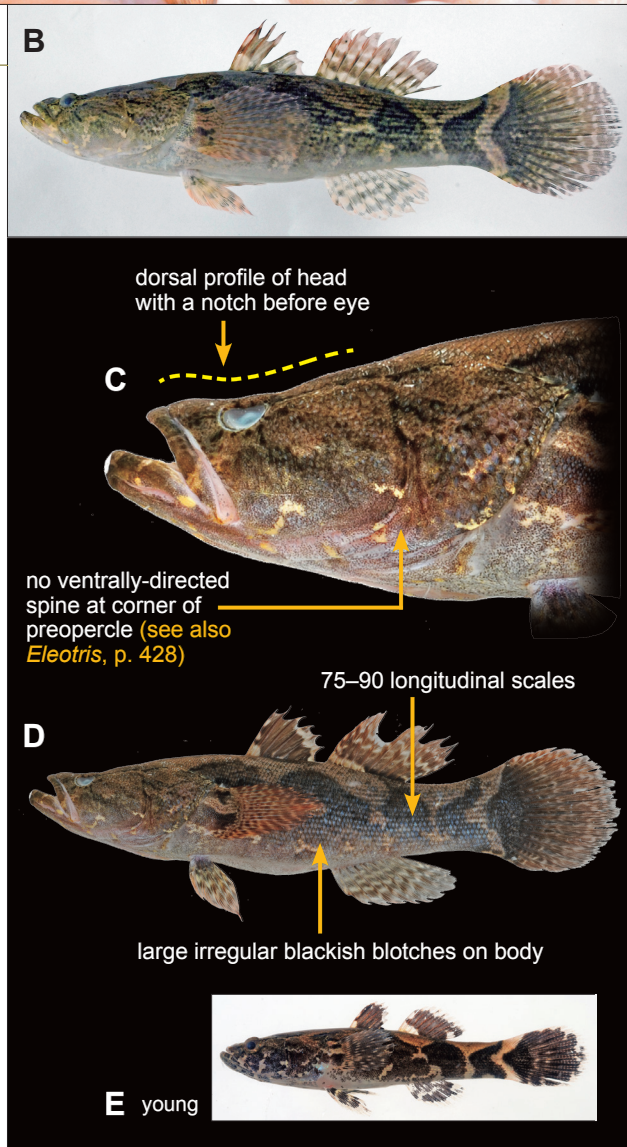
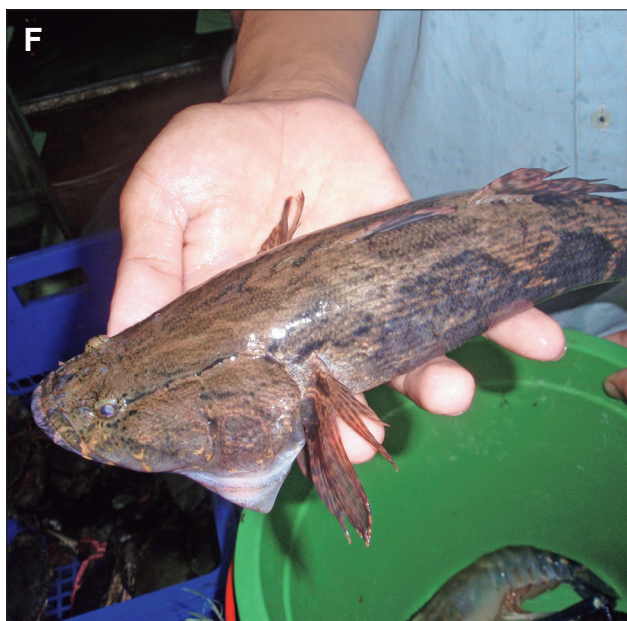
Family: Eleotrididae (FC: 457)

Size: 60 cm SL (Larson & Lim, 2005: 54).

Distribution: Mekong Basin in Laos, Thailand, Cambodia, and Vietnam; Thailand, Malaysia, Indonesia, and the Philippines.

Notes: A large-sized species of eleotridid sleeper (*sensu* Nelson, 2006), found in various kinds of freshwater habitats, such as reservoirs, ponds, rivers, and streams; it is highly esteemed as a commercially important fish (commonly known as "marbled goby"), and is commonly seen at markets throughout the Mekong region.

Its characteristic color pattern readily distinguishes this fish from the other Mekong fishes. See also "Notes" of *Oxyeleotris urophthalmus*, p. 425)



A) Marketed fish, not preserved (Phnom Penh, Cambodia, photo: KS); B) CTU-P 2674 (photo: LXT); E) CTU-P 231 (photo: LXT); C and D) CTU-P 5169 (photo: HVM); F) Marketed fish, not preserved (Cần Thơ, Vietnam, photo: KS)



Ophiocara porocephala (Valenciennes, 1837)

Family: Eleotrididae (FC: 457)

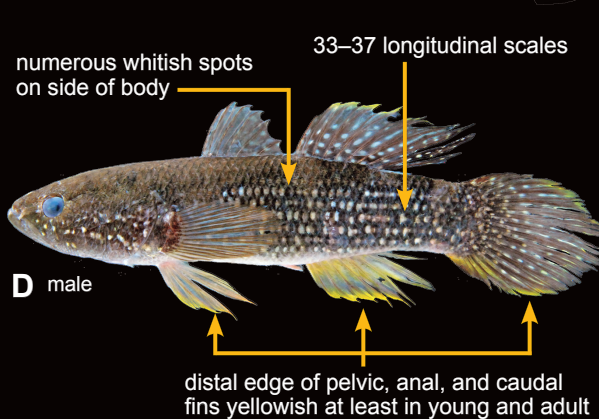
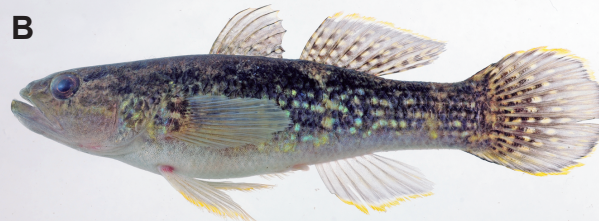
Size: 24.0 cm SL (Larson & Lim, 2005: 53, as *Ophiocara porocephala*).

Distribution: Mekong Basin in Vietnam; Indo-West Pacific.

Notes: A relatively large-sized species of eleotridid sleeper (*sensu* Nelson, 2006), found in mangrove areas.

We here follow Akihito and Meguro (1974) on the scientific name. Kottelat (2013c: 394), however, recognized *O. ophicephalus* [originally described as a species of *Eleotris* by Valenciennes in Cuvier and Valenciennes (1837) together with *porocephala*] as valid over *O. porocephala*, since the specific name *ophicephalus* was given a precedence by Günther (1861), who appears to be the first reviser.

Vidthayanon (2008: 287) recorded this fish from the Mekong Delta, although, during our field surveys in 2007–2013, we could not confirm it from the region. Rainboth (1996b: 195) reported it from the Cambodian Mekong, but, judging from its habitat preference, the species is not expected from the region. Note that the species is actually common in the western coastal region of Cambodia (see, e.g., photo F)



A, B, and E) Non-Mekong specimen [Phu Quoc Island, Vietnam, CTU-P 4230, photo: KS (A, underwater) and LXT (B and E)]; C and D) non-Mekong specimen (Koh Kong, Cambodia, IFREDI-P 6518, photo: PT); F) marketed fish, not collected (Koh Kong, Cambodia, photo: KS)

A



Eleotris melanosoma Bleeker, 1853

Family: Eleotrididae (FC: 457)

Size: 15.5 cm SL (Akihito, 1967: 137).

Distribution: Mekong Basin in southern Cambodia and Vietnam; Indo-West Pacific.

Notes: A medium-sized species of eleotridid sleeper (*sensu* Nelson, 2006), found in brackish estuaries and adjacent freshwater areas; it is commonly seen in the Mekong Delta (particularly in the Vietnamese region).

Fishes of *Eleotris* are readily distinguished from the other eleotridid sleepers in the Mekong by having a downwardly-directed spine at the angle of the preopercle (usually hidden under the skin). Many of the species in the genus look similar to one another, and the species identification needs a detailed examination of the sensory-papillae rows on the head (see, e.g., Akihito, 1967; Akihito *et al.* in Nakabo, 2013). In other words, the accuracy of species identification of fishes of *Eleotris* without examination of sensory-papillae rows on the head appears to be doubtful.

In his book of fishes of the Cambodian Mekong, Rainboth (1996b: 195) stated, "4 species recorded" for *Eleotris*, although he presented only a single species *Eleotris fusca* in the book; he also noted, "Several species of this genus are found in the Mekong Delta and probably also occur in Cambodia." Vidthayanon (2008: 212, 287) subsequently reported a single species, *E. fusca*, from the Mekong Delta, and noted, "locally common in the markets." Rainboth *et al.* (2012: 101) listed 4 species of *Eleotris* (*viz.*, *E. fusca*, *E. melanosoma*, and 2 unidentified species) from the Mekong Delta. All of these previous records are difficult to be precisely confirmed based on their identification, due to the lack of any information on the configuration of the sensory-papillae rows on head.

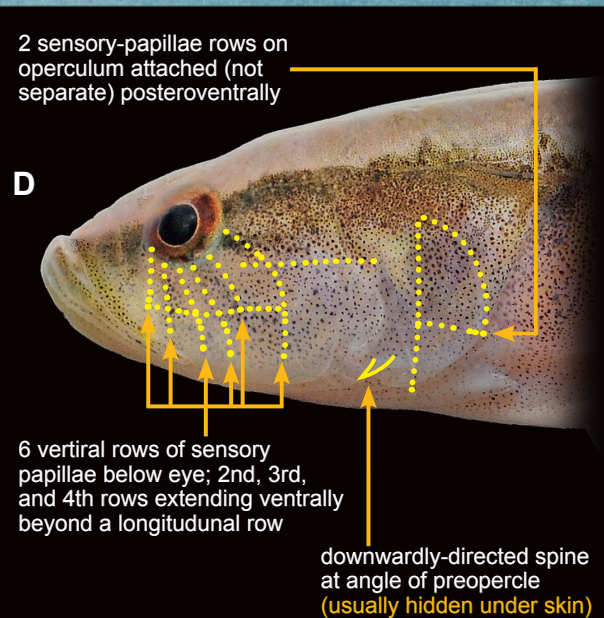
As noted by Vidthayanon (2008: 212), fishes of *Eleotris* are actually common at the markets in the Vietnamese region (see photograph on the next page). During our field surveys in 2007–2013, we examined numerous specimens of *Eleotris* from the Cambodian and Vietnamese Mekong; of these, more than 300 specimens were registered as CTU-P and IFREDI-P collections for a detailed examination. All of these specimens we examined were, however, identified as *E. melanosoma*; no specimens of the other congeners, including *E. fusca*, were confirmed from this region. Note that *Eleotris fusca* has 8 vertical rows of sensory papillae below the eye (4th and 6th rows extend ventrally beyond a longitudinal row) (see, e.g., Akihito, 1967).



B young



C



D



E

A) CTU-P 2869 (photo: LXT); B) CTU-P 1949 (photo: CG); C) CTU-P 585 (photo: KS)



Marketed fish of *Eleotris melanoscama*, not collected (Cần Thơ, Vietnam, photo: KS)

Gobies

Fishes of the family Gobiidae, commonly known as gobies, usually have united pelvic fins, forming a circular or ovoid sucking disc [separated in some marine/brackish-water species vs. always separated in the eleotridid sleepers (pp. 421–429)]. The Gobiidae is a species-rich fish family, next to the Cyprinidae (see p. 72). Nelson (2006: 423) estimated that Gobiidae comprises at least 1,950 species in the world. The estimation is, however, highly provisional; as noted by him, many species remain undescribed, in addition to more than a few taxonomic confusions yet unresolved.

Gobies are distributed in tropical, subtropical, and temperate regions (and even in the boreal region in some) throughout the world. They are found in almost every kinds of aquatic habitat, including, e.g., freshwater streams, lakes, brackish estuaries, mudflats, coastal marine waters, and even in deep waters (to about 500 m depth), although many of them are confined to the brackish-water areas and shallow coastal waters; this is also true for the case in the Mekong.

Due to their taxonomic confusion and the difficulty of species identification, the goby fauna in the Mekong is still poorly understood. During our field surveys in 2007–2013, we collected more than 72 species from the Mekong, but many additional species are undoubtedly expected, particularly from the brackish estuaries in Vietnam.



Glossogobius sparsipapillus Akihito & Meguro, 1976

Family: Gobiidae (FC: 460)

Size: 10.7 cm SL (one of CTU-P 3315).

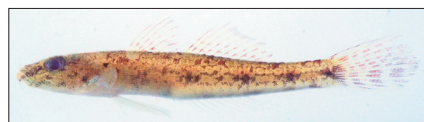
Distribution: Mekong Basin in Vietnam; non-Mekong Basin in Thailand, peninsular Malaysia, and Singapore.

Notes: A medium-sized species of gobies, found in brackish estuaries and adjacent freshwater areas; it is commonly collected by trawl nets in large rivers of the Vietnamese Mekong. This goby, *Glossogobius sparsipapillus*, was originally described based on the specimens from the Mekong Basin at Cần Thơ, Vietnam (Akihito & Meguro, 1976).

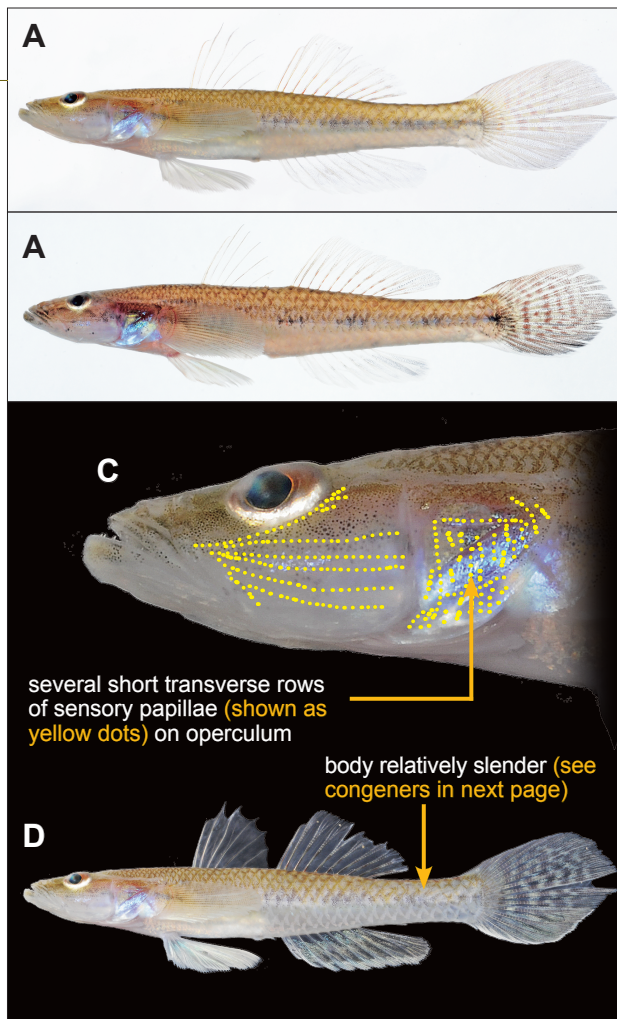
The Indo-Pacific gobiid genus *Glossogobius* comprises several medium- to large-sized gobies with a slender body, a pointed, relatively long snout, a projecting lower jaw, and a distinctly bilobed (notched) tongue. Many species look similar to each other, and the species identification needs examination of sensory papillae rows on the cheek and operculum in many cases.

During our field surveys in 2007–2013, we collected at least 3 species of *Glossogobius* from the Mekong. Of these, *G. sparsipapillus* is readily distinguished by its slender body and several short transverse rows of sensory papillae on the operculum.

Some additional species of *Glossogobius* are also expected from estuarine areas of the Mekong, and the photo below shows one of the examples; it is *G. bicirrhosus* (collected from Koh Kong, western Cambodia), which is readily distinguished from the congeners by having a pair of short barbels at the chin.



◀ Non-Mekong specimen of *Glossogobius bicirrhosus* (Koh Kong, Cambodia, IFREDI-P 6349, photo: PT)



A, C, and D: CTU-P 1378 (photo: LXT); B: CTU-P 2222 (photo: LXT)



Glossogobius aureus Akihito & Meguro, 1975

Family: Gobiidae (FC: 460)

Size: 27.3 cm SL (Akihito & Meguro, 1975: 129).

Distribution: Mekong Basin in Laos, Cambodia, and Vietnam (?Thailand); Indo-West Pacific.

Notes: A large-sized species of gobies, found in fresh- and brackish-water rivers and lakes; it appears to be most common species of the genus in the Mekong Delta, and esteemed as a food fish particularly in the Vietnamese Mekong.

Glossogobius aureus is similar to *G. giuris* (below) in general appearance, but has 5 uniserial longitudinal rows of sensory papillae on the cheek (vs. some rows multiple in *G. giuris*) and a less distinct dark-line pattern on the body (vs. usually distinct).

Kottelat (2000: 88) suggested that the Mekong fish previously identified as *Glossogobius koragensis* (e.g., Rainboth, 1996b) was misidentification of *G. aureus*. We concur with Kottelat's suggestion; we examined numerous specimens of *Glossogobius* from the Cambodian and Vietnamese Mekong, but could not find any specimens of *G. koragensis* (whereas *G. aureus* is very common). Note that *G. koragensis* is apparently restricted to Papua New Guinea (see, e.g., Allen & Coates, 1990: 108; Allen, 1991; Kottelat, 2000: 88).

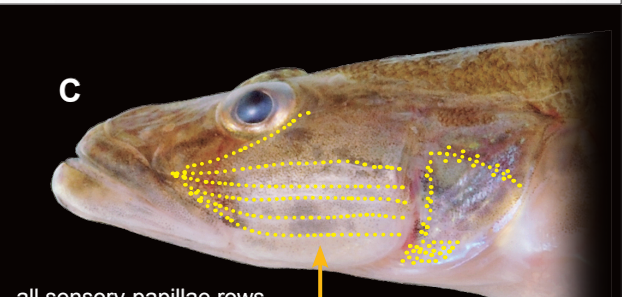
Glossogobius giuris (Hamilton, 1822)

Family: Gobiidae (FC: 460)

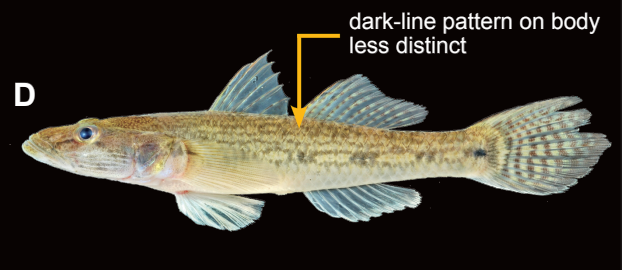
Size: 35 cm SL (Larson & Lim, 2005: 101).

Distribution: Mekong Basin in Cambodia and Vietnam; Indo-West Pacific.

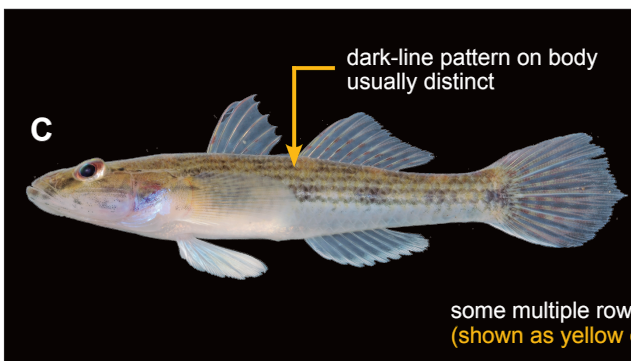
Notes: A large-sized species of goby, found in fresh- and brackish-water rivers; it is frequently collected together with a similar-looking congener *Glossogobius aureus* (see above).



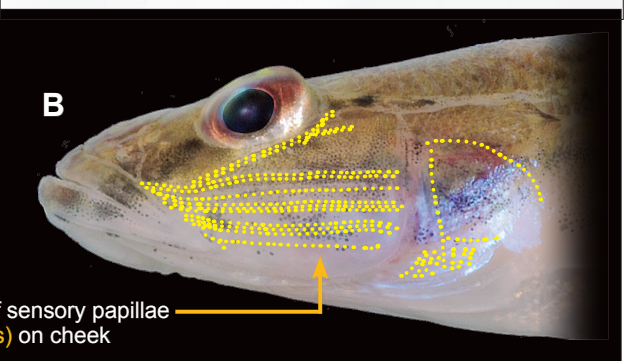
all sensory-papillae rows (shown as yellow dots) on cheek simple



dark-line pattern on body less distinct



dark-line pattern on body usually distinct



some multiple rows of sensory papillae (shown as yellow dots) on cheek

A) Freshly-collected fish, not preserved (Bến Tre, Vietnam, photo: HVM); B) CTU-P 4676 (photo: LXT); C) CTU-P 5351 (photo: HVM); D) CTU-P 1203 (photo: LXT)

A) CTU-P 5350 (photo: HVM); B and C) CTU-P 3673 (photo: LXT)

Psammogobius biocellatus (Valenciennes, 1837)**Family:** Gobiidae (FC: 460)**Size:** 8.0 cm SL (Larson & Lim, 2005: 137).**Distribution:** Mekong Basin in Vietnam; Indo-West Pacific.

Notes: A medium-sized species of gobies, found in brackish estuaries and adjacent coastal marine waters; it is possibly uncommon in the Mekong Delta. One of the photographed specimens (C–E) was collected from a small mangrove creek at the Mekong Delta in Bến Tre, Vietnam; the other specimens (A and B) were taken from Phú Quốc Island (where the species is common), off the southwestern coast of the Mekong Delta.

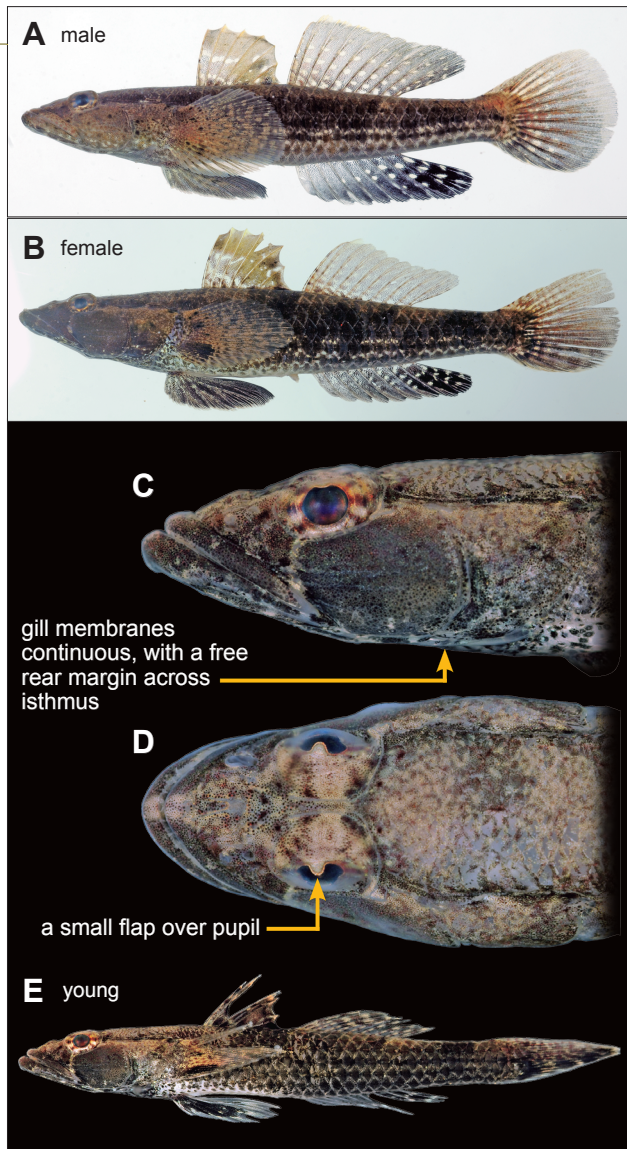
Psammogobius is superficially similar to *Glossogobius*, but has a wider gill opening and continuous gill membranes with a free posterior margin across the isthmus (vs. gill membrane attaching to the isthmus in *Glossogobius*). *Psammogobius* comprises 4 species (Allen, 2017), and, of these, only the single species *P. biocellatus* is known from the Mekong. Among the Mekong gobies, *P. biocellatus* is readily distinguished by having a blackened head and body and a small flap over the pupil (iris lappet; see photo D); it might be confused with species of *Butis* (pp. 421–423), but has fused pelvic fins forming a circular disc (vs. pelvic fins of *Butis* are separated, as in the other eletridids).

Silhouettea sp.**Family:** Gobiidae (FC: 460)**Size:** 2.8 cm SL (CTU-P 4658).**Distribution:** Mekong Basin in Vietnam.

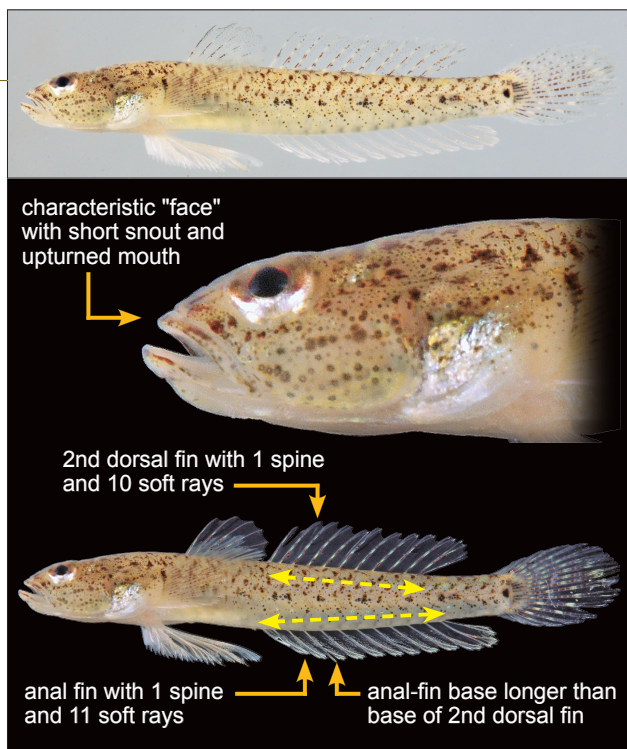
Notes: Only a single specimen was collected from a small shallow pool on an exposed sandy-mud flat around brackish estuaries at the Mekong Delta in Bạc Liêu, Vietnam.

Silhouettea comprises several small, bottom-dwelling gobies, usually found on sandy or sandy-mud bottoms in coastal marine waters and brackish estuaries. At least 9 species are known from the Indo-West Pacific (Larson & Miller, 1986; Miller, 1988; Randall, 2008), although some additional unnamed species are found there (Shibukawa *et al.*, 2013). Fishes of *Silhouettea* are somewhat similar to the other sand-dwelling genus *Favonigobius* (next page), but have more dorsal or anal-fin rays (10 or more vs. usually 8–9 in *Favonigobius*), anal-fin base longer than the base of the second dorsal fin (vs. subequal or shorter than the dorsal-fin base), and a pelvic frenum (anterior membrane between spines) with a crenate edge (vs. entire). In the fields or aquaria, fishes of *Silhouettea* are frequently examined to be shallowly buried under bottom sands (as in photo D).

The Mekong species is similar to an Australian congener *Silhouettea evanida* by having one spine and 10 soft rays of the second dorsal fin, one spine and 11 soft rays of the anal fin, and a midlateral series of small (not large) black spots on the body; it differs from *S. evanida* in lacking, *e.g.*, any distinct blackish markings behind 5th spine of first dorsal fin [vs. blackish spot(s) present behind the 5th spine in *S. evanida*]. Note that *S. evanida* appears to be a smaller species; the largest known specimen is a 21.0 mm SL male (Larson & Miller, 1986).



A) Non-Mekong specimen (Phú Quốc Island, Vietnam, CTU-P 4181, photo: LXT); B) non-Mekong specimen (Phú Quốc Island, Vietnam, CTU-P 4180, photo: LXT); C–E) CTU-P 5364 (photo: KS)



CTU-P 4658 [photo: LXT and KS (aquarium photo only)]



Favonigobius reichei (Bleeker, 1854)

Family: Gobiidae (FC: 460)

Size: 6.5 cm SL (Larson & Lim, 2005: 98).

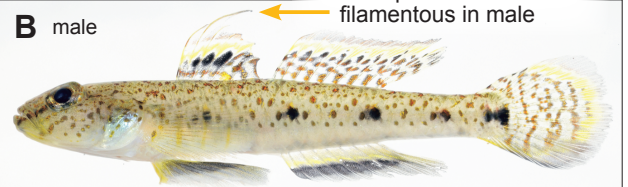
Distribution: Mekong Basin in Vietnam; Indo-West Pacific.

Notes: A small-sized species of gobies, found in shallow coastal marine waters, brackish estuaries, and adjacent freshwater areas. A female (photos A, C, D, and E) was collected from a brackish estuary at the Mekong Delta in An Giang, Vietnam.

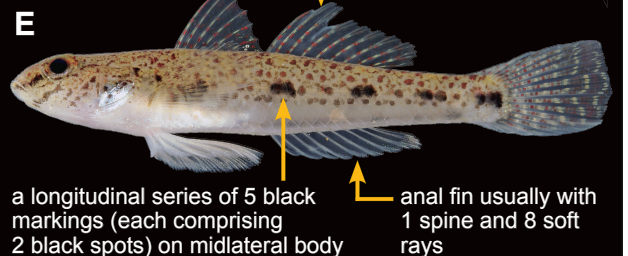
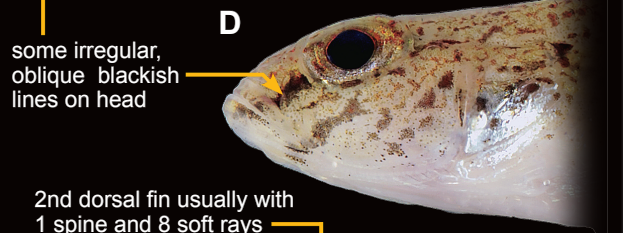
Favonigobius comprises several small, bottom-dwelling gobies, usually found on sandy or sandy-mud bottoms in coastal marine waters and brackish estuaries. About 10 species are known from the Indo-West Pacific (Hoesle, 1986; KS, pers. obs.), although some additional unnamed species are found there (Shibukawa *et al.*, 2013). See also "Notes" of *Silhouettea* sp. (left page).

Rainboth (1996b) showed *Favonigobius aliciae* in his book of fishes of the Cambodian Mekong, with a comment that this species "may also be found in the tidal zone of Cambodia." One of us (KS) examined the holotype of *Aboma aliciae* (= *F. aliciae*), and confirmed that the holotype is a female of *F. reichei* having 7 spines on first dorsal fin abnormally; namely, *A. aliciae* (= *F. aliciae*) is a junior synonym of *F. reichei*. Note that *F. reichei* almost always has 6 spines on the first dorsal fin, as in the congeners.

B male



C female



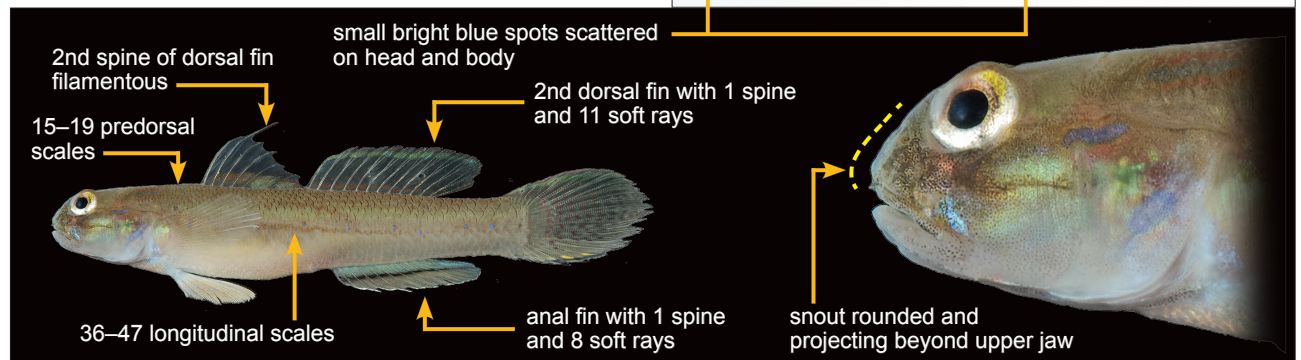
Amoya gracilis (Bleeker, 1875)

Family: Gobiidae (FC: 460)

Size: 6.0 cm SL (Larson & Lim, 2005: 59, as *Acentrogobius gracilis*).

Distribution: Mekong Basin in Vietnam; Western Pacific.

Notes: A medium-sized species of gobies, found in brackish estuaries (particularly in mangrove areas). Tran *et al.* (2013) misidentified this species as *Amoya moloana*, a similar species with a distinct black bar below the eye (vs. absent in *A. gracilis*) and just a few or no predorsal scales (vs. 15–19) (Larson & Lim, 2005, as species of *Acentrogobius*).



A, C, D, and E) CTU-P 5248 (photo: HVM); B) non-Mekong specimen (Ryukyu Islands, Japan, photo: KS)

CTU-P 2261 (photo: LXT)



"*Acentrogobius*" *globiceps* (Hora, 1923)

Family: Gobiidae (FC: 460)

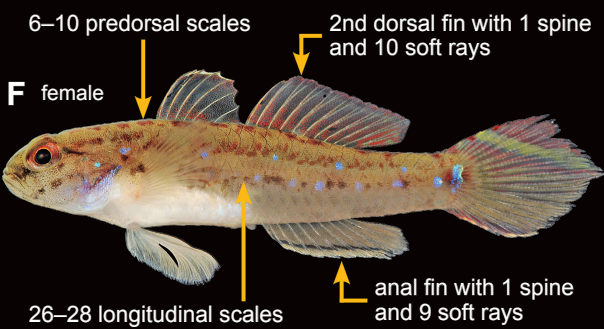
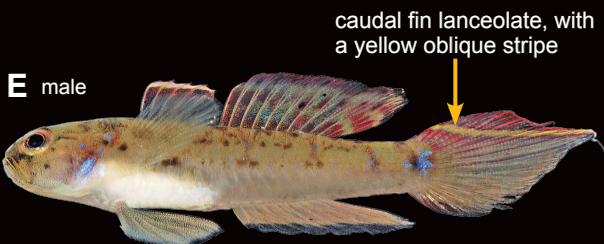
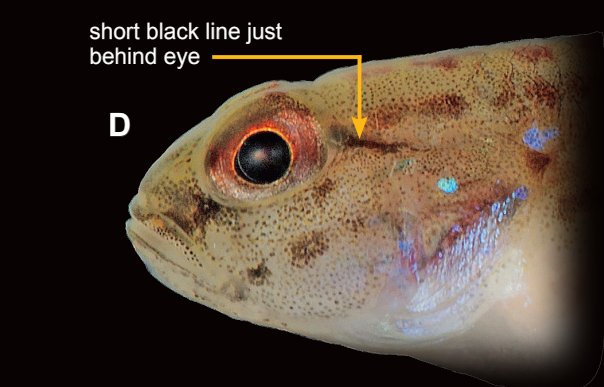
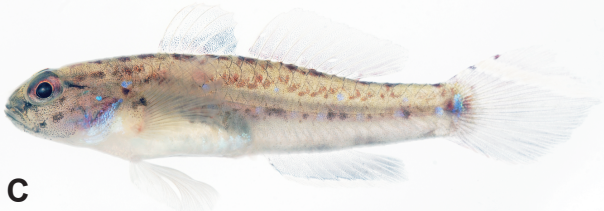
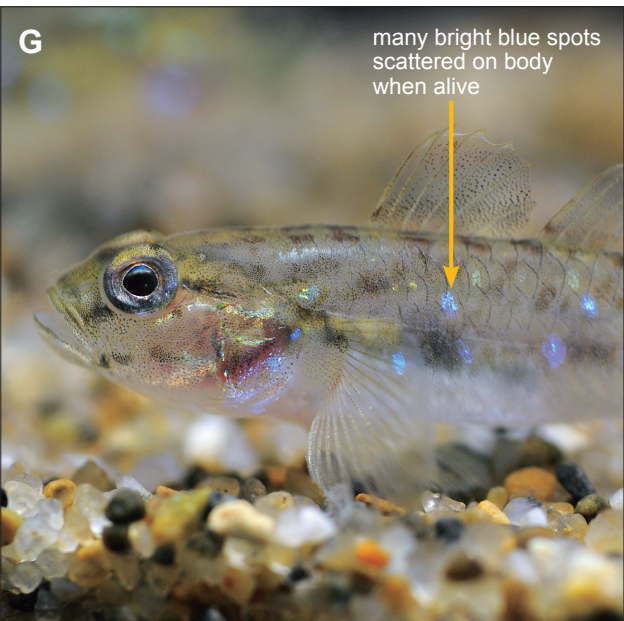
Size: 3.5 cm SL (Larson & Lim, 2005: 88, as *Drombus globiceps*).

Distribution: Mekong Basin in Vietnam; Indo-West Pacific.

Notes: A small-sized species of gobies, found in brackish estuaries; it is very common, or sometimes abundant, in mangrove areas with soft mud bottoms (*e.g.*, prawn ponds) in the Vietnamese Mekong.

This small goby can be distinguished from the other Mekong gobies by having many bright blue spots scattered on the body when alive, a lanceolate caudal fin with a characteristic oblique yellowish stripe, and short black line just behind the eye. It is similar to the congener "*Acentrogobius*" *ocyurus* (not included in this book, but expected from the Mekong) in general appearance, but the latter has deeper body and a narrow dark vertical bar around the end of the caudal peduncle (see photograph in Larson & Lim, 2005: 90, as *Drombus ocyurus*).

This species has been misplaced in the catch-all genus *Acen-*
trogobius or *Drombus* (*e.g.*, Larson & Murdy, 2001; Larson & Lim, 2005), together with some similar-looking species in the Indo-West Pacific. The generic assignment is being studied by D. F. Hoese (Australian Museum, Sydney) and Z. Jaafar (National University of Singapore, Singapore).



A (bottom), B and E) CTU-P 5377 [photo: KS (A) and HVM (B and E)]; A (top), C, D, and F) CTU-P 5378 [photo: KS (A, aquarium photo) and HVM (C, D, and F)]; G) one of CTU-P 4717 (aquarium photo: KS)



***Acentrogobius caninus* (Valenciennes, 1937)**

Family: Gobiidae (FC: 460)

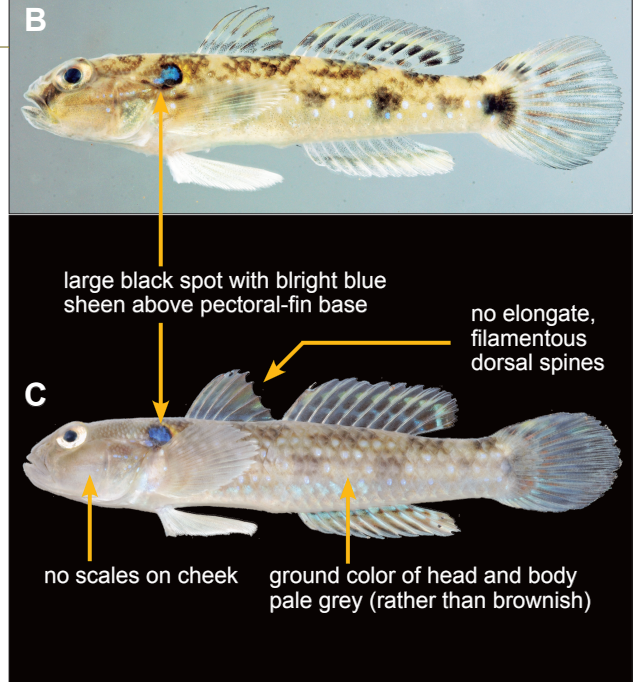
Size: 11.0 cm SL (Larson & Lim, 2005: 57).

Distribution: Mekong Basin in Vietnam; Indo-West Pacific.

Notes: A medium-sized species of gobies, found in brackish estuaries and adjacent shallow coastal marine waters; it is commonly seen at mangrove creeks in the Vietnamese Mekong, but appears to be less abundant than the congener *A. viridipunctatus* (below).

Taxonomy and limits of the genus *Acentrogobius* are still in a state of flux. Many species of the genus have a moderately elongated body, a subcylindrical or slightly compressed head, a non-projecting snout beyond the upper jaw, an enlarged canine-like tooth at each side of the lower jaw, fully-scaled nape, moderately large scales on body, a rounded caudal fin, and many bright blue or greenish spots on body when alive. It is superficially very similar to *Aulopareia* (next page), but has a simple rounded sensory-canal pore just behind the eye (vs. long and slit-like in *Aulopareia*) (Larson & Murdy, 2001). See also "Notes" of "*Acentrogobius*" *globiceps* (left page).

Acentrogobius caninus is distinguished from the other Mekong gobies by having a large black shoulder spot (as large as the eye) superimposed on the bright blue or green spot.



***Acentrogobius viridipunctatus* (Valenciennes, 1937)**

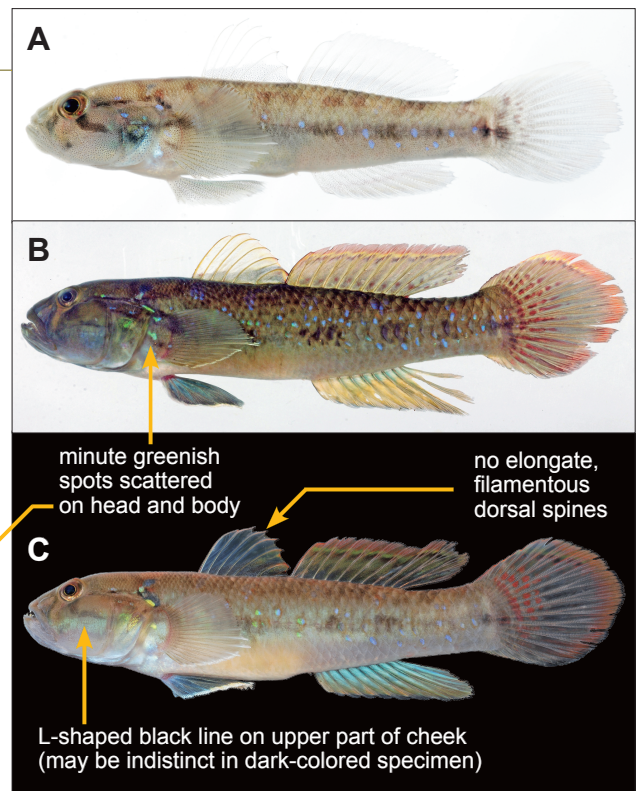
Family: Gobiidae (FC: 460)

Size: 11.0 cm SL (Larson & Lim, 2005: 64).

Distribution: Mekong Basin in Vietnam; Indo-West Pacific.

Notes: A medium-sized species of goby, found in brackish estuaries and adjacent shallow coastal marine waters; it is commonly seen at mangrove creeks in the Vietnamese Mekong.

Acentrogobius viridipunctatus has a characteristic L-shaped black marking below the eye. A similar marking is also seen in *Eugnathogobius variegatus* (p. 464), but *A. viridipunctatus* has a more robust body, less conspicuous and fewer black specklings along the side of the body, and many small bright-greenish spots on the body when alive.



A and B) CTU-P 4654 [photo: KS (A, aquarium photo) and LXT (B)]; C) CTU-P 3301 (photo: LXT)
A) CTU-P 1380 (photo: LXT); B) CTU-P 4675 (photo: LXT); C) CTU-P 2265 (photo: LXT); D) one of CTU-P specimens, just after collected (S6c Trảng, Vietnam, photo: KS)

A

*Aulopareia janetae* Smith, 1945**Family:** Gobiidae (FC: 460)**Size:** 7.2 cm SL (one of CTU-P 1554).**Distribution:** Mekong Basin in Vietnam; Western Pacific.

Notes: A medium-sized, dark-colored species of gobies, found in brackish estuaries and adjacent shallow coastal marine waters; it is commonly trawled at large rivers in the Vietnamese Mekong.

Aulopareia is superficially very similar to *Acentrogobius* (p. 435), and appears to be differentiated merely by having a long and slit-like sensory-canal pore just behind the eye (vs. rounded in *Acentrogobius*) (Larson & Murdy, 2001). Several Indo-Pacific species can be placed in *Aulopareia*, although comprehensive revision of the genus has never been published.

Larson & Murdy (2001: 3595) listed following 6 species of *Aulopareia* from the Western-Central Pacific: *A. atripinnata* (as *atripinnatus*), *A. cyanomos*, *A. janetae*, *A. koumansi*, *A. spiloptera* (as *spilopterus*), and *A. unicolor*. Rainboth *et al.* (2012) recorded all of these 6 species from their "Greater Mekong Ecosystem." Of these, *A. koumansi*, described based on a single 62 mm specimen from the Straits of Malacca (Herre in Herre & Myers, 1937), resembles *A. janetae* shown here by sharing an entirely scaled cheek and a large black spot just above the pectoral-fin base, but lacks a black spot at upper part of the caudal-fin base (see unnumbered figure in plate 1 of Herre in Herre & Myers, 1937). Note that Smith (1945: 535) did not state/illustrate about a black spot above pectoral-fin base in his original description/figure of *A. janetae*; he merely described, "Body and head pale, unmarked... a blackish spot about size of eye at upper base of caudal fin, with a pale area posteriorly." Freshly-collected specimen of *A. koumansi* in Rainboth *et al.* (2012, pl. 101, fig. 2104) is clearly identical with *A. janetae* shown here. In his checklist of the inland-water fishes in Southeast Asia, Kottelat (2013c) also listed 6 species of *Aulopareia*; he neglected *A. koumansi*, instead of inclusion of *A. masoni*, which was originally described from India by Day (1873). Further examination appears to be needed for clarifying relationships between *A. koumansi* and *A. janetae*; and, therefore, present identification of our specimens as *A. janetae* is merely provisional.

During our field surveys in 2007–2013, we examined only 3 species of *Aulopareia*, all of which are shown in this book. The voucher specimens of *A. koumansi* (see above) and *A. atripinnata* (see "Notes" of *A. unicolor*, next page) in previous records (e.g., Rainboth *et al.*, 2012) need to be rechecked the identification.

Aulopareia janetae is readily distinguished from the other Mekong gobies by having the combination of the following characters: a black spot as large as the eye above the pectoral-fin base; a slightly smaller black spot at the upper part of the basal part of the caudal fin; cheek and operculum that are covered by

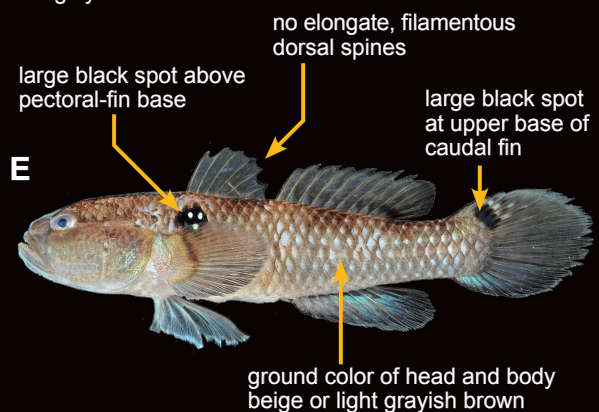
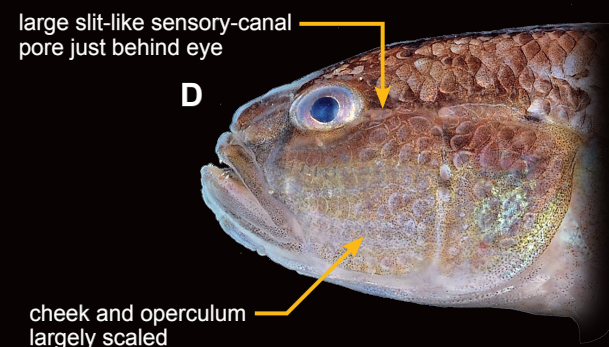
B



C



D

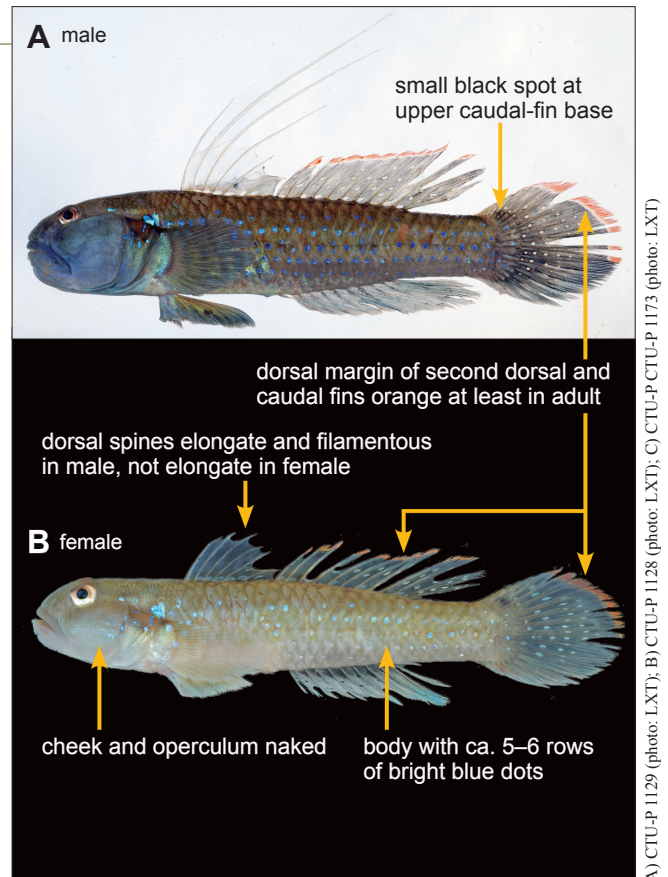


scales. First feature is also found in *Acentrogobius caninus* (p. 435), although *A. janetae* is readily distinguished by the other coloration and the scaled cheek. Similar (but smaller and more indistinct) black spot at the upper base of the caudal fin is also found in *A. cyanomos* and *A. unicolor* (next page), but these 2 species lack the scales on the cheek.

A) CTU-P 2172 (photo: LXT); B) CTU-P 1773 (photo: LXT); C-E) CTU-P 1126 (photo: LXT)

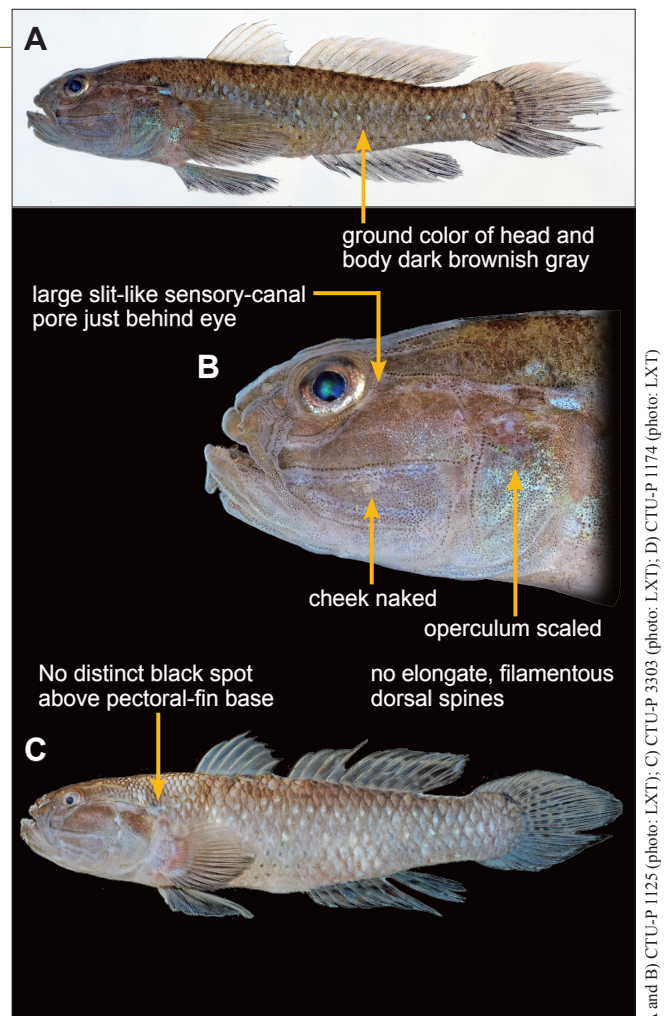
Aulopareia cyanomos (Bleeker, 1849)**Family:** Gobiidae (FC: 460)**Size:** 8.9 cm SL (CTU-P 1129).**Distribution:** Mekong Basin in Vietnam; Indo-West Pacific.**Notes:** A medium-sized species of gobies, found in brackish estuaries and adjacent shallow coastal marine waters; it is fairly common in mangrove creeks in the Vietnamese Mekong.

Aulopareia cyanomos is similar to the large-sized species of *Acentrogobius* (e.g., *A. caninus* and *A. viridipunctatus*) and the other congeners shown in this book. Characteristics differentiated *Aulopareia* from *Acentrogobius* are shown in "Notes" of *A. janetae* (left page). *Aulopareia cyanomos* can be distinguished from the other Mekong congeners (*A. janetae* and *A. unicolor*) by having a slightly more slender body, a paler coloration, a naked cheek/operculum, many pale sky dots on caudal fin, and a reddish distal margin of second dorsal and caudal fins. Middle spines of the first dorsal fin are greatly elongated and filamentous in the adult males, whereas not in females and juveniles.

*Aulopareia unicolor* (Valenciennes, 1837)**Family:** Gobiidae (FC: 460)**Size:** 7.1 cm SL (CTU-P 3303).**Distribution:** Mekong Basin in Vietnam; Western Pacific.**Notes:** A medium-sized species of gobies, found in brackish estuaries and adjacent shallow coastal marine waters; it is fairly common in large rivers creeks in the Vietnamese Mekong. Large adults are frequently trawled together with *Aulopareia janetae* (left page); small young shown below (photo D) was collected from a mangrove creek.

Rainboth (1996b: 197) and Rainboth *et al.* (2012: 102) recorded *Acentrogobius chrolostigmatoides* from the Mekong, although it is a junior synonym of *Aulopareia unicolor* (Kottelat, 2013c: 400). Rainboth (1996b) noted that the species "Occurs in the Mekong delta and may be found as far upstern as the tidal zone in Cambodia"; we could not verify the Cambodian record of this species during our field surveys in 2007–2013. *Aulopareia atripinnata*, which was originally described as a species of *Rhinogobius* from Gulf of Thailand off mouth of Tachin River by Smith (1933), appears to be conspecific with *A. unicolor* shown here, judging from personal observation of the holotype of the former by KS.

Aulopareia unicolor is similar to the congener *A. janetae* (left page) in general appearance, but lacks a black spot above the pectoral-fin base and the cheek scales. See also "Notes" of *A. janetae*.





Gobiopsis macrostoma Steindachner, 1861

Family: Gobiidae (FC: 460)

Size: 8.0 cm SL (Larson & Lim, 2005: 106).

Distribution: Mekong Basin in Vietnam; Indo-West Pacific.

Notes: A medium-sized species of gobies, found in brackish estuaries and adjacent coastal marine waters; it is commonly trawled from large, turbid rivers in the Vietnamese Mekong. Smith (1945: 521) noted that the species (as *Pogonogobius planifrons*, a junior synonym) "is found in brackish and fresh water" in Thailand.

Lachner & McKinney (1978) reviewed the genus *Gobiopsis*, and recognized 10 species from the Indo-Pacific region. Lachner & McKinney (1979) assigned an additional 3 species to the genus, 2 of which were described as new in their paper. Subsequently Shibukawa (2010), Prokofiev (2016), and Allen *et al.* (2018) described 3 additional species of the genus; total number of species of *Gobiopsis* is thus now 16. The other taxonomic notes on the genus were given by Delventhal & Mooi (2014), who found that *Callogobius liolepis* is a junior synonym of *Gobiopsis aporia*.

Gobiopsis macrostoma appears to be only species of the genus found in the brackish estuaries. The other congeners are known to inhabit coastal marine waters (to 101 m depth) with coral rubbles or sandy or mud bottoms (Lachner & McKinney, 1978, 1979; Shibukawa, 2010). The broad and depressed head with "pug-nose" snout, several short cutaneous barbels on head, and a fleshy mid-cheek fold readily distinguish *G. macrostoma* from the other gobies from the Mekong.

When freshly collected, in many cases, *G. macrostoma* is enveloped in yellow mucus, as shown in photo B.



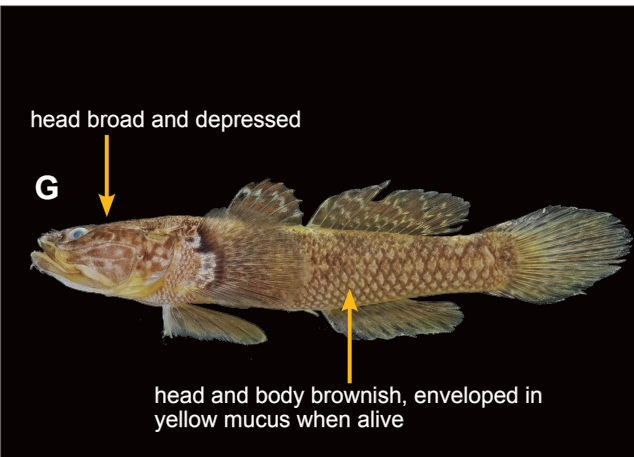
several short barbels on snout and lower jaw

E

jaws large, extending posteriorly well beyond a vertical line through eye

F

interorbital space broad

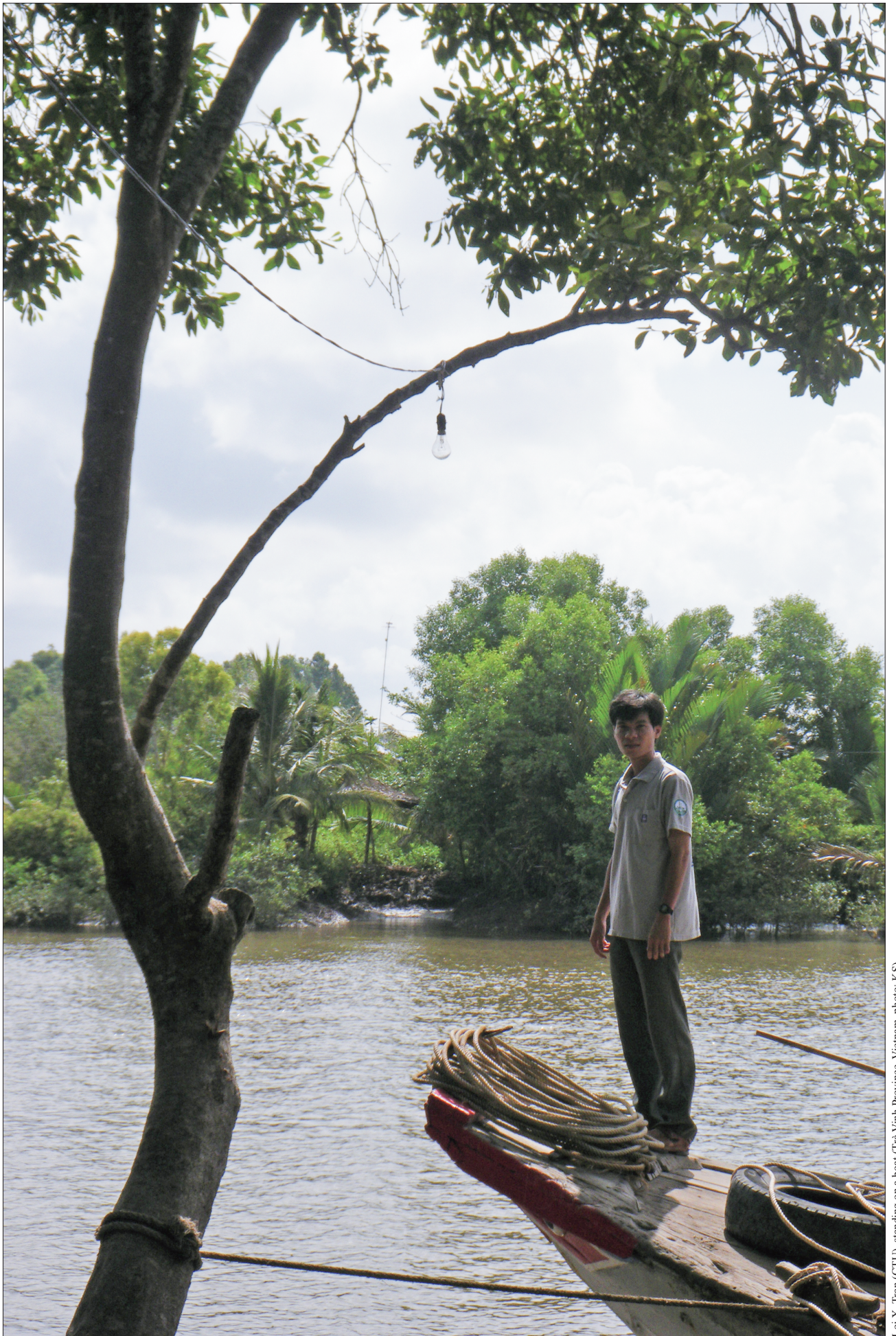


head broad and depressed

G

head and body brownish, enveloped in yellow mucus when alive

A, E, and G) CTU-P 1544 (photo: LXT); B) CTU-P 1528 (photo: LXT); C) CTU-P 1127 (photo: LXT); D and F) CTU-P 2225 (photo: KS)



Loi X. Tran (CTU), standing on a boat (Trà Vinh Province, Vietnam, photo: KS)