



New records and new information on four eel species from Oman (Teleostei: Anguilliformes: Congridae, Muraenesocidae)

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Abstract

Four species of marine eels are reported for the first time from waters of Oman in the western Arabian Sea. *Conger macrocephalus* Kanazawa, 1958 (Congridae) was known previously only from the Philippines and Taiwan. We report one specimen from Oman. "*Congromuraena*" *musteliceps* Alcock, 1894 (Congridae), a species of uncertain generic classification, was previously known only from the type series collected in the Bay of Bengal. We report two specimens from Oman and provide an extended description of the species and comment on its relationships. *Xenomystax trucidans* Alcock, 1894 (Congridae) has been known only from the holotype collected in the Bay of Bengal. We redescribe the species on the basis of three specimens from Oman and provide a key to the known species of the genus. *Sauromuraenesox vorax* Alcock, 1889 (Muraenesocidae) was known previously from the Bay of Bengal. We report three specimens from Oman and one from the eastern Arabian Sea.

Key words: fishes, taxonomy, systematics, ichthyology, Arabian Sea, Indian Ocean, distribution, biogeography.

Citation: Smith, D.G., Jawad, L. & Al-Kharusi, L.H. (2017) New records and new information on four eel species from Oman (Teleostei: Anguilliformes: Congridae, Muraenesocidae). *Journal of the Ocean Science Foundation*, 28, 34–46.

doi: <http://dx.doi.org/10.5281/zenodo.996846>

Introduction

It is becoming increasingly apparent that the diversity of fishes in the sea is far greater than we realize. Current collecting activities are regularly bringing to light new species and new geographical records of known species. Papers documenting range extensions are frequently dismissed as unimportant, but knowledge of which species live in particular areas provides the raw material for studies on biogeography, speciation, ecology, fisheries, and conservation. In this paper, we report the presence of four species of eel (Anguilliformes: Congridae, Muraenesocidae) for the first time from Oman in the western Arabian Sea. Two of these were previously known only from their original descriptions or from subsequent work on the type material, and a third has not been recorded from outside the type locality in the Bay of Bengal. Three of them appear to be endemic to the northern Indian Ocean. We provide expanded descriptions of these species, including characters not covered in previous works.

Materials and Methods

Specimens cited here are deposited in the National Museum of Natural History, Smithsonian Institution, Washington, DC (USNM), the Academy of Natural Sciences of Philadelphia (ANSP), and the Zoological Survey of India, Kolkata (ZSI). Counts and measurements are as in Böhlke (1989). All lengths are total length (TL) unless otherwise noted, proportions also include head length (HL).

Order ANGUILLIFORMES

FAMILY CONGRIDAE

Conger macrocephalus Kanazawa, 1958

Figure 1; Table 1.

Conger macrocephalus Kanazawa, 1958: 254, pl. 1, M (holotype, USNM 164334, Philippines). Ho *et al.* 2015: 146 (recorded from Taiwan).

Material examined. USNM 410631 (1, 495 mm), Indian Ocean, Arabian Sea, Oman, 16° 24' N, 54° 36' E, date 2007. USNM 164334 (holotype, 796 mm), Philippines, Verde Island Passage, 13° 35' N, 121° 08' E, 329 m, R/V *Albatross* sta. 5367, 22 February 1909.

Description. Morphometric characters in percent TL: preanal 41.6–42.1, predorsal 24.6–24.7, head 19.2–21.0, trunk 20.6–22.9, depth at anus 5.6–6.3; in percent HL: snout 23.1–25.2, eye 13.7–13.8, snout–rictus 27.3–34.0, gill opening 10.7–13.5, interbranchial 21.0–28.8, pectoral fin 26.5–28.2. Meristic characters: preanal lateral-line pores 35–36, preoperculomandibular pores 9, infraorbital pores 6, supraorbital pores 3, supratemporal pores 1; predorsal vertebrae 15, preanal vertebrae 36–39, total vertebrae 136–138 (See Table 1 for details).

Remarks. *Conger macrocephalus* is characterized by its relatively low vertebral count and the large size of the head in relation to the rest of the body (hence the name *macrocephalus*, “long head”). It was described from a single specimen, although Kanazawa (1958) suggested that the specimens from Indonesia identified as *Conger vulgaris* by Bleeker (1864: 26) and *Conger conger* by Weber & de Beaufort (1916: 259) also belonged here. Bleeker, however, reported the head length as 7–9 in body length (“*capite acuto 7 ad 9 in longitudine corporis*”), or 11–14% TL, which seems too short for *C. macrocephalus*. Weber & de Beaufort’s (1916) work was not original but merely repeated what Bleeker (1864) had reported. Smith (1989: 515) suggested that *Conger*



Figure 1. *Conger macrocephalus*, USNM 410631, 495 mm TL, whole view (above), head view (below).

TABLE 1
Meristic and morphometric characters in *Conger macrocephalus*

	Philippines		Oman	
	USNM 164334		USNM 410631	
TL	796 mm	proportion	495 mm	proportion
Preanal (& %TL)	335 mm	42.1	206 mm	41.6
Predorsal (& %TL)	197 mm	24.7	122 mm	24.6
Head (& %TL)	153 mm	19.2	104 mm	21.0
Trunk (& %TL)	182 mm	22.9	102 mm	20.6
Snout (& %HL)	38.6 mm	25.2	24 mm	23.1
Eye (& %HL)	21.1 mm	13.8	14.2 mm	13.7
Snout–rictus (& %HL)	52 mm	34.0	28.4 mm	27.3
Gill opening (& %HL)	16.3 mm	10.7	14.0 mm	13.5
Interbranchial (& %HL)	44.1 mm	28.8	21.8 mm	21.0
Pectoral fin (& %HL)	40.6 mm	26.5	29.3 mm	28.2
Depth at anus (& %TL)	50 mm	6.3	27.9 mm	5.6
Predorsal vertebrae	15		15	
Preanal vertebrae	36		39	
Total vertebrae	136		138	
Preanal LL pores	35		36	

philippinus Kanazawa, 1958 might be a synonym of *C. macrocephalus*, but closer examination does not support this conclusion. Among other characters, the head is much shorter in *C. philippinus* (12.7% TL in the holotype) than in *C. macrocephalus*, and the dorsal-fin origin is farther behind the tip of the pectoral fin.

This species was long known only from the holotype, but Ho *et al.* (2015: 146) reported it to be common in Taiwan. Quero & Saldanha (1995) reported a specimen from Réunion Island in the southern Indian Ocean as *Conger wilsoni* (Bloch & Schneider, 1801). However, the relatively long head (17% TL) and low vertebral count (135) suggest that it might be *C. macrocephalus* instead.

The Oman specimen shows a few slight differences in proportional measurements from the holotype, but the sample size is too small to draw any conclusions. In addition, some of these characters may vary with size. The Oman specimen is not only the first confirmed record of this species from the Indian Ocean, it is the first record of any species of *Conger* other than *Conger cinereus* Rüppell, 1871 from the entire northern Indian Ocean.

“*Congromuraena*” *musteliceps* Alcock, 1894

Figures 2 & 3.

Congromuraena musteliceps Alcock, 1894: 133, pl. 7, fig. 5 (lectotype, ZSI 13698, Bay of Bengal, off Madras coast, 13° 51' 12" N, 80° 28' 12" E, 265–457 m, 30 January 1894).

Bathycongrus musteliceps (Alcock, 1894)—Ogilby 1898: 292.

Gnathophis musteliceps (Alcock, 1894)—Castle 1995: 713, Figures 4A–C, Table 1.

Material examined. USNM 410632 (2, 315 & 364 mm), Indian Ocean, Arabian Sea, Oman, 16° 24' N, 54° 36' E, collected 2007.



Figure 2. “*Congromuraena*” *musteliceps*, USNM 410632, 364 mm TL, whole view (above), head view (below).

Description. Morphometric characters in percent TL: preanal 33.3–35.7, predorsal 16.7–18.4, head 18.7–20.1, trunk 14.6–15.7; depth at anus 5.4–5.6; in percent preanal: predorsal 50.0–51.5, head 56.2; trunk 43.8; depth at anus 15.2–16.7; in percent HL: snout 22.1–22.4, eye 8.6–8.8, interorbital 6.8–9.3, snout–rictus 24.9–27.7, gill opening 17.5–19.2, interbranchial 11.7–12.3, pectoral fin 24.4–28.1. Meristic characters: preanal lateral-line pores 34, preoperculomandibular pores 10, infraorbital pores 8, supraorbital pores 6, supratemporal pores 3; predorsal vertebrae 10–11, preanal vertebrae 35–36, total vertebrae 151 (+?)–159.

Body moderately elongate, deepest at head, tapering toward tail, rounded in cross section anteriorly, compressed posteriorly; tip of tail attenuate but not filiform; anus near first third of total length; head length greater than trunk. Dorsal and anal fins continuous with caudal fin; dorsal fin begins anterior to base of pectoral fin; anal fin begins immediately behind anus. Pectoral fin present, moderate in size. Gill opening very large and deep, much greater than interbranchial space. Lateral line complete, well developed.

Head deepest at gill opening, becoming narrower anteriorly; snout pointed, its tip overhanging lower jaw, intermaxillary teeth exposed when mouth closed. Mouth moderately large, rictus slightly behind a vertical through midpoint of eye; upper lip without an upturned flange; lower lip with a narrow downturned flange. Anterior nostril a short tube, on side of snout, about midway between tip of lower jaw and tip of snout; posterior nostril a simple opening in front of eye, at about mid-eye level and about one nostril diameter from anterior margin of eye. Anterior tip of snout, where it extends beyond intermaxillary tooth patch, depressed, with a narrow longitudinal ridge on its basal half.

Cephalic pores relatively numerous, variable in size. Infraorbital canal with 8 pores: first relatively large, immediately behind dorsal end of anterior nostril; second also relatively large, below and behind first, on edge of upper lip, somewhat closer to anterior nostril than posterior nostril; third slightly smaller, beneath anterior margin

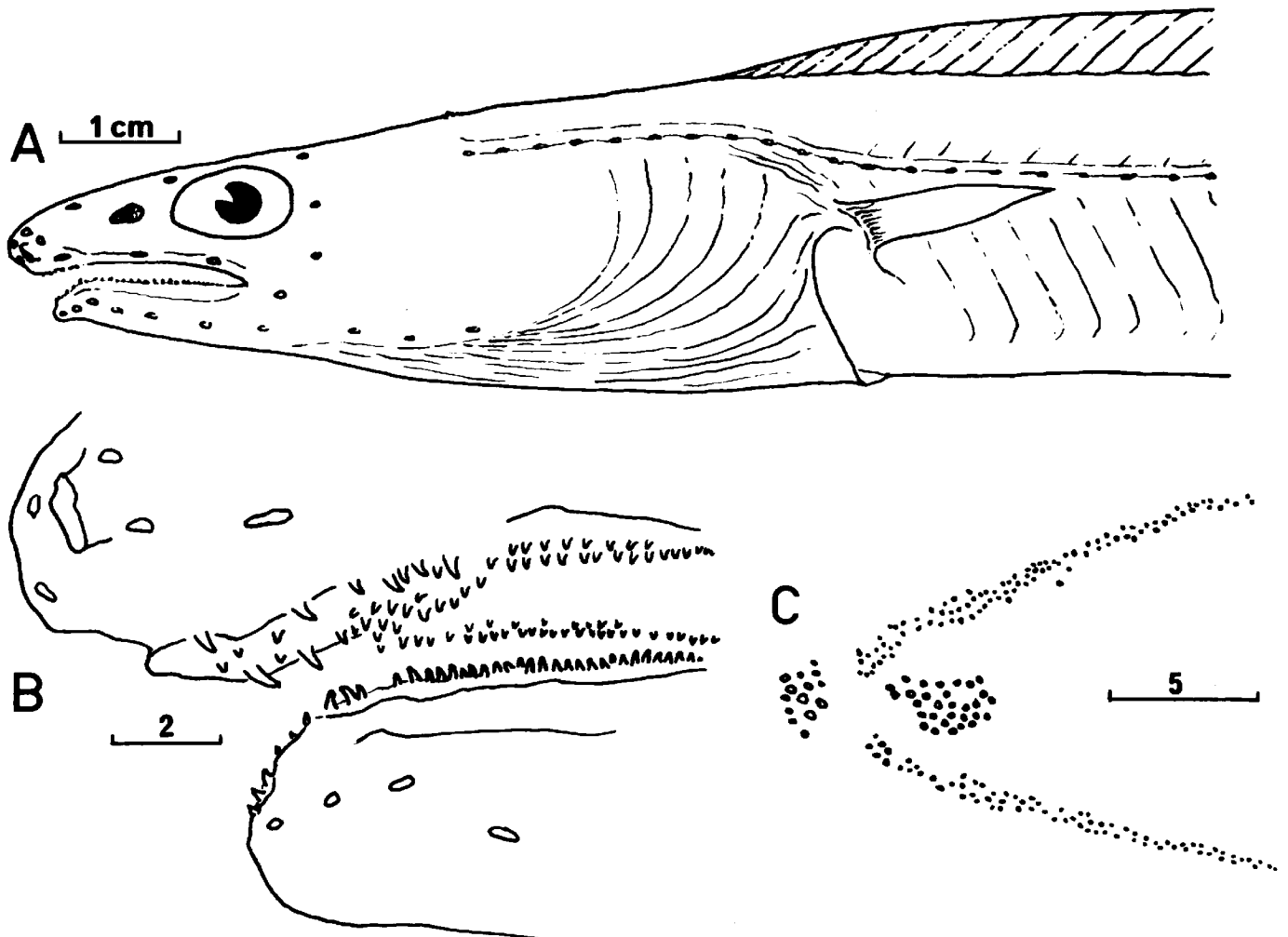


Figure 3. “*Congromuraena*” *musteliceps*, head and teeth, from Castle (1995, Fig. 4).

of posterior nostril; fourth just before rictus, below middle of eye; fifth behind rictus and beneath posterior margin of eye; sixth through eighth much smaller, located in ascending branch of canal behind eye, approximately at level of ventral, middle, and dorsal margin of eye. Supraorbital canal with 6 pores: first (ethmoidal pore) on underside of snout, relatively large, next to median dermal ridge and medial to anterior nostril; second larger, at anterior tip of snout; third is largest of all pores, on dorsolateral surface of snout, above and slightly before anterior nostril; fourth much smaller, on top of snout, somewhat closer to anterior nostril than to posterior nostril; fifth slightly behind a vertical through posterior margin of posterior nostril; sixth on top of head slightly behind posterior margin of eye. Preoperculo-mandibular canal with 10 pores: first small, at tip of lower jaw; second and third progressively larger, third is largest of series; fourth through sixth pores somewhat smaller, located between third pore and rictus; seventh in mandibular canal behind rictus; eighth through tenth in preopercular section, tenth somewhat higher than preceding. Supratemporal canal with three small pores, one median and one on each side.

Color in preservative dark brown, fins with dark edges. Branchial area black. Peritoneum dark.

Remarks. The head appears somewhat distorted in preservation, with the top of the snout flattened and narrowed rather than convex, but the characters all agree with the description and with Castle's (1995) redescription of the lectotype.

This species was described from 5 specimens collected in the southwestern Bay of Bengal in 1894. To our knowledge, it has not been reported again until now. The present specimens extend the range to the western Arabian Sea.

Alcock (1894) originally placed this species in the catch-all genus *Congromuraena* (an alternative spelling of *Congeruraena* Kaup, 1856), technically a synonym of *Ariosoma* Swainson, 1838, but long used for species of uncertain affinity. Ogilby (1898) placed it in his new genus *Bathycongrus*, but that genus was not well defined by modern standards; the species originally included are now placed in 4 different genera. The type species of *Bathycongrus*, *B. nasicus* (Alcock, 1893), has distinctly enlarged teeth, especially on the intermaxillary and vomer, and a smaller gill opening; in these characters it differs sharply from "*C.*" *musteliceps*.

Castle (1995: 713) redescribed "*C.*" *musteliceps* from the type series and provisionally placed it in the genus *Gnathophis* Kaup, 1859, though admitting that it agreed only in some but not all characters. On close examination, it seems apparent that "*C.*" *musteliceps* does not belong in *Gnathophis*. Most obviously, in *Gnathophis* the tip of the tail is relatively blunt and slightly stiffened, with the caudal rays reduced in length. "*Congromuraena*" *musteliceps*, on the other hand, has a slender, attenuate tail, quite unlike that of *Gnathophis*. In "*C.*" *musteliceps*, the head length is distinctly greater than the trunk length, whereas in *Gnathophis* it is equal to or less. The greatly enlarged branchial area and large gill openings are also quite distinct from those of *Gnathophis*. The dark brown, almost black, color of the body is also unlike *Gnathophis*, which is light to medium brown. In general appearance, color, and dentition, it is more reminiscent of a genus like *Japonoconger* Asano, 1958. Further study is needed to determine the generic affinities of "*Congromuraena*" *musteliceps*. Indeed, it may not fit in any of the currently recognized genera of Congridae.

Xenomystax trucidans Alcock, 1894

Figures 4–6.

Xenomystax trucidans Alcock, 1894: 134 (holotype, ZSI F13704, Laccadive Sea, 7° 05' 45" N, 75° 04' E, 719 fm [1315 m]).

Paraxenomystax trucidans (Alcock, 1894)—Reid 1940: 1.

Material examined. ANSP 112029 (1, 250 mm), Indian Ocean, Bay of Bengal, Andaman Sea, 10° 39' N, 96° 35' E, 384 m, 24 March 1963; USNM 410639 (1, 354 mm), Indian Ocean, Arabian Sea, Oman, 16° 24' N, 54° 36' E, collected 2007; USNM 410640 (2, 405 & 413 mm), same.



Figure 4. *Xenomystax trucidans*, USNM 410639, 354 mm TL, whole view (above), head view (below).

Description. Morphometric characters in percent TL: preanal 33.9–39.2, predorsal 14.0–16.4, head 16.4–19.1, depth at anus 2.6–3.6; in percent preanal length: predorsal 40.2–45.2, head 47.1–51.7, depth at anus 6.7–10.5; in percent HL: snout 35.2–39.5, eye 8.0–9.5, interorbital 4.4–4.8, snout–rictus 42.9–55.6, eye–posterior nostril 5.9–7.2, gill opening 7.3–13.8, interbranchial 3.6–5.6, pectoral fin 15.7–21.6. Meristic characters: preoperculo-mandibular pores 13–14, infraorbital pores 8, supraorbital pores 6, supratemporal pores 3; predorsal vertebrae 6–9, preanal vertebrae 39–41, total vertebrae ca. 198–200.

Body moderately elongate; anus near first third of TL; tail attenuate. Dorsal and anal fins continuous with caudal fin; dorsal fin begins slightly before base of pectoral fin; anal fin begins immediately behind anus. Gill opening large and deep, greater than interbranchial space. Lateral line complete, but pores difficult to see and count.

Mouth large; toothed portion of maxilla extending beyond posterior margin of eye, curved slightly downward near posterior end. Snout projecting beyond tip of lower jaw; fleshy part of snout not extending beyond its bony tip. Lips reduced, upper and lower labial flanges absent, teeth exposed when mouth closed. Anterior nostril tubular, located just behind anterior tooth plate, directed anterolaterally. Posterior nostril elliptical, located about one eye diameter in front of eye, at mid-eye level.

Head pores numerous, some distinctly enlarged. Infraorbital canal with 8 pores; first pore moderately small and elliptical, just behind anterior nostril, its anterior edge about even with anterior end of maxillary tooth patch;

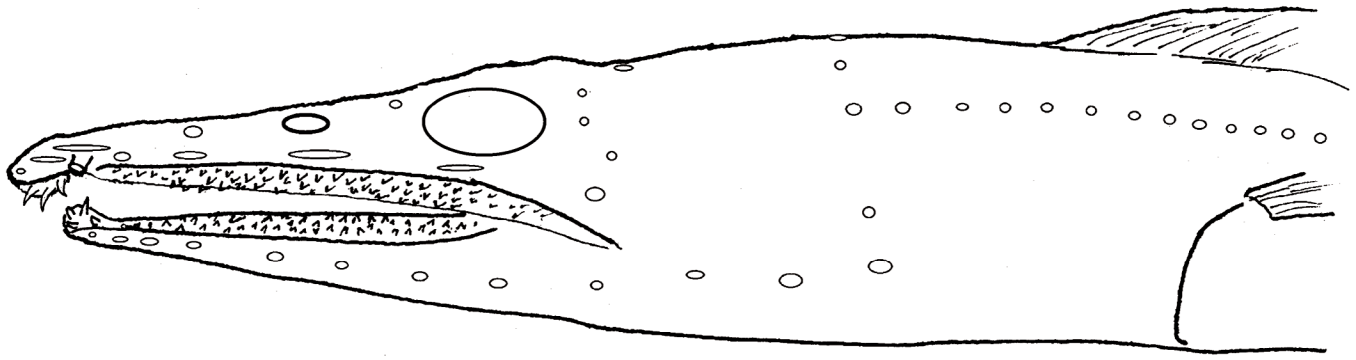


Figure 5. *Xenomystax trucidans*, head view showing teeth and pores.

second, third, and fourth pores elongate and slit-like, second between first pore and level of posterior nostril, third below posterior nostril, fourth pore below pupil of eye; fifth pore smaller than preceding pores, located above posterior end of maxilla; sixth, seventh, and eighth pores behind eye in ascending branch of canal, sixth pore above fifth pore, seventh and eighth slightly anterior. Six supraorbital pores: first (ethmoidal pore) relatively small, at tip of snout; second large and slit-like, immediately in front of anterior nostril; third slightly larger and also slit-like, above anterior nostril; fourth smaller and elliptical, about midway between third pore and posterior nostril; fifth even smaller, slightly before anterior margin of eye; sixth on top of head behind posterior margin of eye. Preoperculomandibular canal with 13–14 pores (one specimen with 14 on one side): first 9 (one specimen with 10 on one side) located along lower jaw before posterior end of maxilla; next three distinctly larger, extending in a row directly behind the preceding; last pore above and slightly anterior to twelfth. Supratemporal canal with 3 pores, one median and one on each side.

Teeth conical, prominent, exposed when mouth closed. Intermaxillary tooth patch slightly longer than broad, separated from vomerine and maxillary teeth by a constricted, toothless gap, with about 5 longitudinal rows of teeth, inner and posterior ones larger; inner teeth directed ventrally, outer teeth ventrolaterally. Maxillary teeth in 2 distinct series; outer teeth in narrow bands, innermost teeth largest, outer teeth much smaller and directed ventrolaterally; inner teeth in a single row, well separated from outer teeth by a smooth, toothless groove. Mandibular teeth in narrow bands, inner teeth larger except for those of innermost row, which are distinctly smaller and slightly separated from outer teeth; inner series begins well short of anterior end of jaw; anterior to that point, next-to-innermost series, which contains largest teeth, becomes somewhat separated from more outer teeth; anteriormost mandibular teeth enlarged and fitting into space between intermaxillary and maxillary teeth when mouth closed. Vomer with about 4 enlarged median teeth anteriorly; a series of small teeth on either side of anteriormost enlarged median teeth, converging anteriorly into an irregular row extending anteriorly into toothless gap, but ending short of intermaxillary tooth patch; a few smaller teeth extending a short distance behind posteriormost large tooth; enlarged median vomerine teeth are largest in mouth.

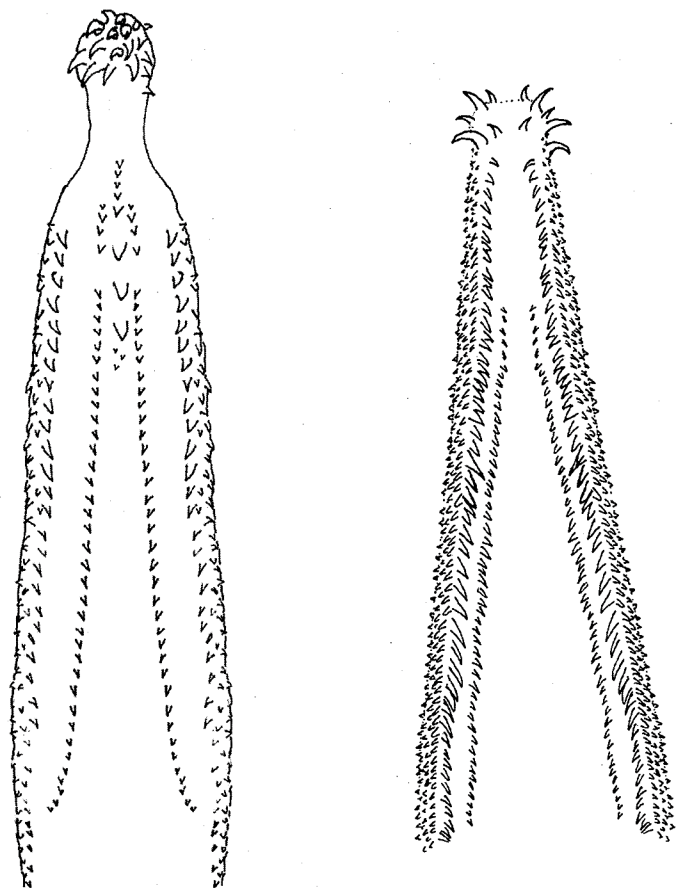


Figure 6. *Xenomystax trucidans*, upper dentition (left) and lower dentition (right).

Color in preservative medium brown to black; dorsal and anal fins clear for most of length, becoming dark posteriorly. Peritoneum dark, stomach and intestine pale. Smallest specimen with a few scattered melanophores midlaterally including a patch of small melanophores below lateral line slightly behind mid-length, apparently remnants of larval pigment.

Remarks. This species was described from a single specimen from the Laccadive Sea, off the southwestern tip of India. It has only been mentioned sporadically in the literature since. Reid (1940) included it in his new genus *Paraxenomystax*; Castle (1975: 23) tentatively identified and described larvae from the Indian Ocean; and Smith (1989: 559) referred to a specimen from the Indian Ocean (ANSP 112029), but gave no details. Castle (1995) redescribed Alcock's congrid eels but did not include *X. trucidans*, possibly because he considered it a muraenesocid, not a congrid. The specimens described here extend the range to the western Arabian Sea.

Castle's (1975) identification of the larva is probably correct. The number of myomeres (198) is within the range of vertebral counts of the adults reported here (ca. 198–201), and the position of the last vertical blood vessel at myomere 58 is close to the number of precaudal vertebrae (53–55). The pigmentation of the larva illustrated by Castle is similar to the traces of larval pigment on the smallest Oman specimen (Fig. 6), especially the patch of melanophores just below the mid-lateral line slightly behind mid-length.

The genus contains 5 species. The type species *Xenomystax atrarius* Gilbert, 1891 (*X. rictus* Garman, 1899 is a synonym) occurs in the eastern Pacific from Canada to Chile (Peden 1972). *Xenomystax bidentatus* (Reid, 1940) and *X. austrinus* Smith & Kanazawa, 1989 occur in the western Atlantic. *Xenomystax congroides* Smith & Kanazawa, 1989 occurs in both the eastern and western Atlantic. *Xenomystax trucidans* is the only species known from the Indo-West Pacific, and it occurs only in the northern Indian Ocean. The genus appears to be absent from the entire western and central Pacific. The species of *Gavialiceps* Alcock, 1889 resemble *Xenomystax* in head morphology and dentition but lack pectoral fins. *Xenomystax* has usually been assigned to the Muraenesocidae, but Smith (1989) placed it in the Congridae.

Key to the species of *Xenomystax*

- 1a. Posterior nostril closer to anterior nostril than to eye *X. atrarius*
- 1b. Posterior nostril closer to eye than to anterior nostril 2
- 2a. Posterior nostril more than half eye diameter and more than one posterior nostril diameter in front of eye 3
- 2b. Posterior nostril less than half eye diameter and less than one posterior nostril diameter in front of eye ... 4
- 3a. Small vomerine teeth extending well behind large teeth, reaching nearly to level of eye *X. austrinus*
- 3b. Small vomerine teeth extending only a short distance behind large teeth *X. trucidans*
- 4a. Intermaxillary tooth patch longer than broad; dorsal fin begins over or slightly behind base of pectoral fin; stomach and intestine pale; vertebrae 175–180 *X. bidentatus*
- 4b. Intermaxillary tooth patch as broad as long; dorsal fin begins before base of pectoral fin; stomach and intestine black; vertebrae 189–219 *X. congroides*

FAMILY MURAENESOCIDAE

Sauromuraenesox vorax Alcock, 1899

Figures 7–10.

Sauromuraenesox vorax Alcock, 1889: 458 (holotype, ZSI 11672, Indian Ocean, Bay of Bengal, 20° 17' 30" N, 88° 51' E, 193 fm [353 m]); Talwar 1977 (redescription).

Material examined. ANSP 124826 (1, 238 mm), Indian Ocean, Arabian Sea, 19° 56–51'N, 69° 24' E, 280 m, R/V *Anton Bruun* 4B 207A, 16 November 1963; ANSP 133596 (1, 260 mm; cleared & stained), Indian Ocean, Bay of Bengal, off Madras, India, on muddy bottom, 31 January 1974; USNM 410638 (3, 326–415 mm), Indian Ocean, Arabian Sea, Oman, 16° 24' N, 54° 36' E, collected 2007.



Figure 7. *Sauromuraenesox vorax*, USNM 410638, 415 mm TL, whole view (above), head view (below).

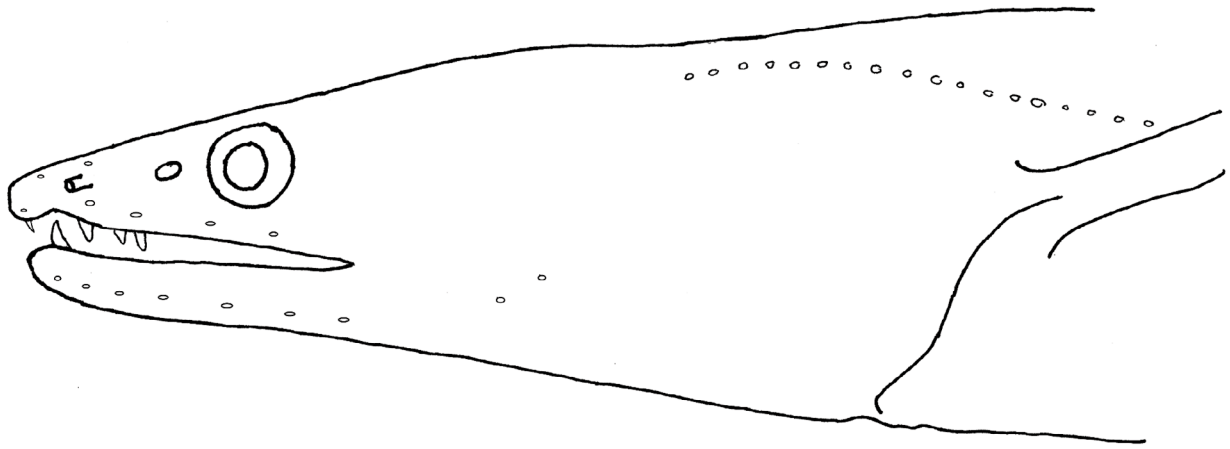


Figure 8. *Sauromuraenesox vorax*, head view showing teeth and pores.

Description. Morphometric characters in percent TL: preanal 46.6–55.6, predorsal 16.4–19.3, head 19.7–24.3, depth at anus 3.4–4.8, depth at gill opening 6.9–7.6; in percent HL: snout 18.9–21.7, eye 8.5–9.5, interorbital 12.0–14.1, snout–rictus 29.9–35.3, gill opening 15.1–20.1, interbranchial 1.4–5.0, pectoral fin 24.4–29.6. Meristic characters: preoperculomandibular pores 9, infraorbital pores 4, supraorbital pores 3, supratemporal pores 0; branchiostegal rays 25; predorsal vertebrae 8–10, preanal vertebrae 49–55, total vertebrae ca. 127–130.

Body moderately elongate, head and trunk large and deep, tail slender, anus near midlength; depth greatest in branchial area, becoming progressively less posteriorly. Dorsal and anal fins continuous with caudal fin; dorsal fin begins well before base of pectoral fin; anal fin begins immediately behind anus; pectoral fin well developed. Gill opening large and deep, much greater than interbranchial space. Lateral line complete.

Head very large compared to body, branchial area large and deep. Eye well developed. Mouth large, rictus well behind eye; lips well developed but without upturned or downturned flanges, upper lip thickened and expanded medially in space between anteriormost maxillary teeth and intermaxillary teeth; teeth concealed when mouth closed. Anterior nostril in a short tube, relatively high on snout, well above lip and well behind tip of snout. Posterior nostril round, in front of mid-eye, with a low, fringed rim.

Head pores small and inconspicuous. Infraorbital canal with 4 pores; first below posterior end of anterior nostril; second below and somewhat anterior to posterior nostril; third below and slightly behind anterior margin of eye; fourth below and slightly behind mid-eye; postrictal and postorbital pores absent. Three supraorbital pores; first (ethmoidal pore) at tip of snout just above lip; second on top of snout about midway between tip of snout and anterior nostril; third above and slightly behind anterior nostril. Preoperculomandibular canal with 9 pores, 7 in mandibular section, all before rictus; 2 pores in preopercular section, well behind mandibular pores, last pore somewhat above level of preceding pore. No pores in supratemporal commissure.

Teeth variable in size, all sharply pointed. Intermaxillary with 5 teeth in a single transverse row, sharp and slightly recurved, outer tooth on each side smaller than middle 3. Vomer with a single row of 4 smooth, conical teeth, slightly recurved, increasing in size from anterior to posterior, latter largest teeth in mouth; vomerine series not extending posteriorly beyond first maxillary teeth (sometimes one or two extra small teeth at anterior and posterior end); no small teeth lateral to median teeth. Maxillary teeth small, conical to slightly triangular, beginning at level of last vomerine tooth; uniserial at anterior and posterior ends, bi- or triserial

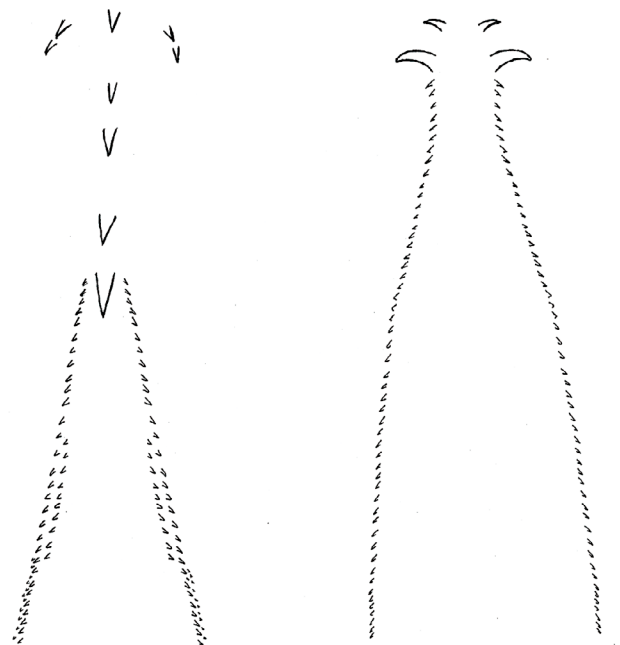


Figure 9. *Sauromuraenesox vorax*, upper dentition (left) and lower dentition (right).

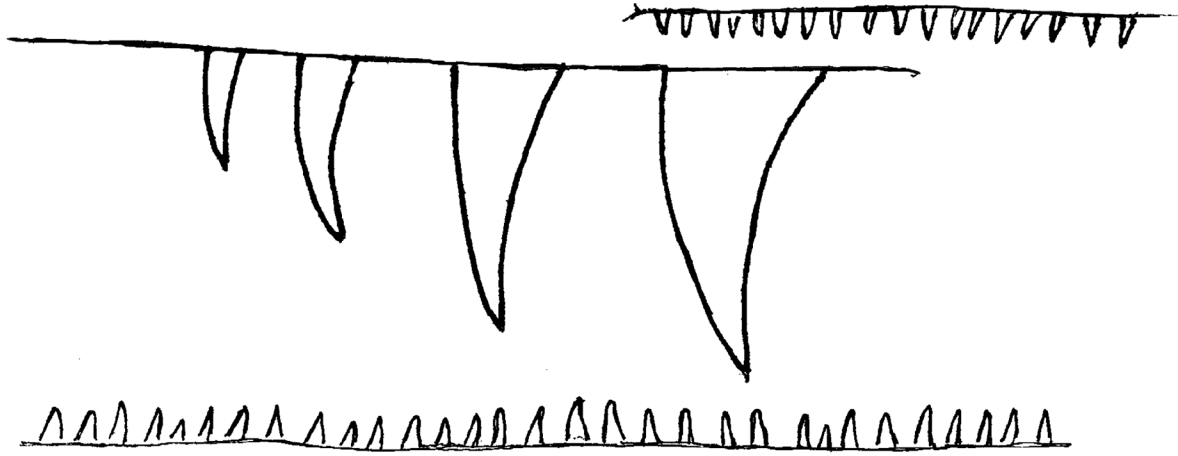


Figure 10. *Sauromuraenesox vorax*, vomerine teeth, lateral view with maxillary and mandibular teeth above and below.

in middle, teeth of outer series larger and more numerous; posteriorly an extra row of much smaller teeth immediately adjacent and lateral to main row. Mandibular teeth uniserial, somewhat larger than maxillary teeth; two anteriormost teeth on each side much larger than others, second larger than first, and fit between intermaxillary and vomerine teeth when mouth closed.

Color gray to brown, inside of branchial cavity dark; vertical fins dark-edged posteriorly; pectoral fin dark.

Remarks. The Muraenesocidae is a poorly defined family that has been used to house a diverse group of eels with conspicuous dentition. It should probably be restricted to *Muraenesox* McClelland, 1844 and 3 similar genera: *Congresox* Gill, 1890; *Cynoponticus* Costa, 1845; and *Sauromuraenesox* Alcock, 1889. Castle & Williamson (1975) provided a good overview of this group and provided illustrations and a brief account of the known species of the first 3 of these genera. Their paper was intended as a preliminary review pending a more thorough treatment. The latter never appeared, however, and the group still needs to be revised.

Gavialiceps and *Oxyconger* Bleeker, 1864 have commonly been referred to this family, but neither seems to belong there. *Gavialiceps* was discussed above under *Xenomystax trucidans*. *Oxyconger leptognathus* (Bleeker, 1858) lacks enlarged teeth on the vomer and has a blunt, stiffened tail tip with reduced caudal rays; in both of these characters it differs significantly from *Muraenesox* and its allies. It needs to be studied in detail to determine its relationships.

Sauromuraenesox differs from the other genera primarily in having the head and trunk much larger and deeper than the slender tail. In addition, the enlarged vomerine teeth are simple and conical, without the cusps, serrations, or compressed shape found in the other 3 genera. The species was described from a single specimen collected in the Bay of Bengal. Talwar (1977) provided an expanded account based on 36 additional specimens, also from the Bay of Bengal. He pointed out that the strange “chameleon-like” shape of the holotype was due to its condition as a ripe female filled with eggs.

In addition to the Oman specimens, we have also examined specimens from the northeastern Arabian Sea (ANSP 124826) and the Bay of Bengal (ANSP 133596). The known distribution of the species now extends from the central Bay of Bengal to the western Arabian Sea. It appears to be absent from the Pacific Ocean.

Acknowledgments

We should like to thank the Ministry of Fisheries Wealth, the Marine Science and Fisheries Centre of the Ministry of Fisheries Wealth, and the Directorate of Agriculture and Fisheries Developmental Fund of Oman for the opportunity to carry out these studies. The Smithsonian Institution provided laboratory facilities and access to collections. We are grateful for the helpful reviews by John Pogonoski and John McCosker.

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