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# Status of *Neoscopelus* (Neoscopelidae) in the Gulf of Mexico with Distributional Notes on *Caulolatilus chrysops* (Branchiostegidae) and *Etelis oculatus* (Lutjanidae)

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**STATUS OF *Neoscopelus*  
(NEOSCOPELIDAE) IN THE  
GULF OF MEXICO WITH  
DISTRIBUTIONAL NOTES ON  
*Caulolatilus chrysops*  
(BRANCHIOSTEGIDAE) AND  
*Etelis oculatus* (LUTJANIDAE)**

While aboard the National Marine Fisheries Service FRS OREGON II in August 1983 (Cruise 136) we were able to gather data on four species of fishes, enhancing our knowledge of the Gulf distribution and relative abundance of these animals. Bottom longlining produced two reef-associated species thought to be rare or absent from the northern Gulf of Mexico, the goldface tilefish (*Caulolatilus chrysops*) and the queen snapper (*Etelis oculatus*). Bottom trawls yielded two neoscopelids, *Neoscopelus macrolepidotus* and *N. microchir*. The captures of both species of *Neoscopelus* in consecutive hauls prompted us to re-examine their distributions in the western North Atlantic.

Specimens are housed at the Florida State Museum, University of Florida (UF), and the Texas Cooperative Wildlife Collections, Texas A&M University (TCWC). Lengths are expressed as standard length.

*Neoscopelus macrolepidotus*  
and  
*Neoscopelus microchir*  
Figs. 1 - 2

The Neoscopelidae are a small (six species) family of pelagic and benthopelagic myctophiform fishes represented in the western North Atlantic by three cosmopolitan species. *Scopelengys tristis* Alcock, 1890, is known from only two collections in the southern Caribbean off Venezuela, while

*Neoscopelus macrolepidotus* Johnson, 1863, and *N. microchir* Matsubara, 1943, are more common (seven confirmed records; Nafpaktitus, 1977). The two species of *Neoscopelus* are readily distinguished from one another on the basis of the length of the LO (lateral) photophore series, and on differences in gill-raker, pectoral and anal fin ray counts. Nafpaktitus (1977) pointed out that "the great morphological similarity of the species in the genus *Neoscopelus* and the very limited circulation of Matsubara's (1943) work on *N. microchir* have resulted in the assignment by previous workers of most of the Atlantic material to *N. macrolepidotus*. The confusion can be resolved only after careful re-examination and correct identification of all the material reported so far." This is exemplified in the reports of Springer and Bullis (1956) and Bullis and Thompson (1965) which included only *N. macrolepidotus* (from 8 stations) in their listings of 6367 western Atlantic stations made over an 11 year period by U.S. Fish and Wildlife Service exploratory fishing vessels.

Nafpaktitus (1977) did not examine any Gulf of Mexico *Neoscopelus* but suggested that the northern Gulf of Mexico (1 station) and Florida Straits (3 stations) specimens listed in Bullis and Thompson (1965) may belong to *N. microchir*. Our captures of both species from consecutive trawl stations off the Louisiana coast demonstrates that both species are represented in the Gulf of Mexico. Examination of additional material of *Neoscopelus* in the Florida State Museum and Texas Cooperative Wildlife Collection, including three lots from stations recorded by Bullis and Thompson (1965), plus Nafpaktitus' (1977) seven records indicate that both *N. macrolepidotus* and *N. microchir* are widespread in appropriate depths from

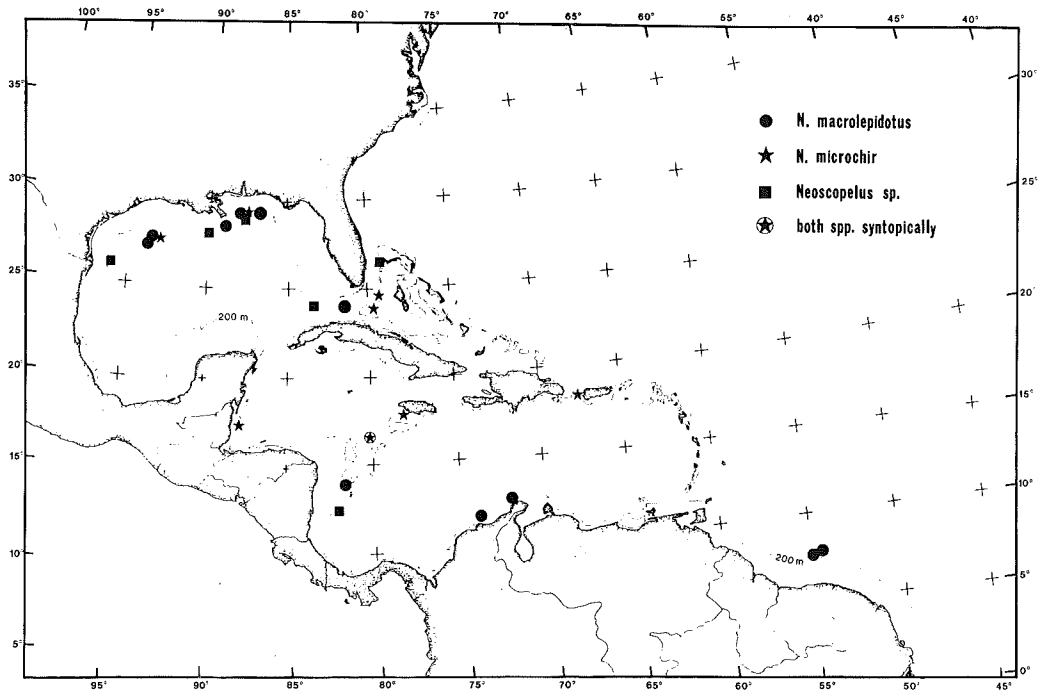


Figure 1. Distributions of *Neoscopelus macrolepidotus* and *N. microchir* in the western North Atlantic based on material examined and records in Nafpaktitis (1977.)

Florida to the Guianas (Fig. 1). The presence of *N. macrolepidotus* and *N. microchir* at R/V Oregon station 3560 establishes that these species are syntopic as well as sympatric in distribution. *N. macrolepidotus* has been taken in 411-1134 meters, and *N. microchir* from 481-640 meters.

### Material Examined

*Neoscopelus macrolepidotus*. UF 40034, 3(89.2-106.8 mm), 27°32'N, 93°27.7'W, 534 m, FRS OREGON II 39535, 12 Aug. 1983; UF 40340, 2(80.0-86.3mm), 24°13'N, 81°24'W, 594 m, R/V SILVER BAY 2421, 28 Oct. 1960; UF 15633, 4(101.9-128.8 mm), 16°35'N, 80°10'W, 576 m, R/V OREGON 3560, 18 May 1962; TCWC 3793.11, 1(111.5 mm), 29°27'N, 86°57'W, 752 m, R/V ALAMINOS 67A5-9A, 19 July 1967; TCWC 3791.4, 3(176-191 mm), 11°33.8'N, 73°45.1'W, 731 m, R/V ALAMINOS 70A10-31, 17 July 1970; TCWC

2568.5, 2(89.5-100.5 mm), 28°40.9'N, 89°10'W, 219-366 m, R/V ALAMINOS 71A5-27, 9 June 1971; TCWC 3561.2, 3(64.1-87.4 mm), 27°15.3'N, 93°41.4'W, 805-1134 m, R/V ALAMINOS 73A10-20, 23 June 1973; TCWC3789.15, 2(141.5-143.0 mm), 12°40'N, 72°00'W, 612-658 m, R/V ALAMINOS 70A10-40, 18 July 1970; TCWC 3379.5, 3(113.4-122.5 mm), 29°11'N, 87°57'W, 552 m, FRS OREGON II 37718, 30 Oct. 1982.

*Neoscopelus microchir*. UF 40011, 4(73.7-88.2 mm), and TCWC 3572.2, 3(68.6-80.5 mm), 27°32.8'N, 93°17.1'W, 481 m, FRS OREGON II 3534, 12 Aug. 1983; UF 40342, 1(131.1 mm), 29°12'N, 87°52'W, 512-549 m, R/V OREGON 3653, 25 July 1962; UF 40343, 1(48.5 mm), 23°59'N, 79°43'W, 640m, R/V COMBAT 450, 24 July 1957; UF 40341, 1(82.1 mm), 24°48'N, 79°17'W, 549 m, R/V SILVER BAY 2475, 8 Nov. 1960; UF 40344, 3(92.6-106.6 mm), 16°35'N, 80°10'W, 576 m, R/V OREGON 3560, 18 May 1962.

*Neoscopelus* sp. 1 (not retained, damaged), 26°13.5'N, 96°13.9'W, 528 m, FRS OREGON II 39576, 23 Aug. 1983.

*Caulolatilus chrysops*

Fig. 3

The branchiostegid genus *Caulolatilus* contains 11 species, eight of which occur in the western Atlantic (Dooley 1978, 1981). *C. chrysops* (Valenciennes, 1833), has been recorded from North Carolina to the Tortugas, Florida; Cuba; Venezuela and Brazil, but not from the Gulf of Mexico proper (Dooley 1981). Hoese and Moore (1977) note that *C. chrysops* is reported from Yucatan and the Gulf of Campeche, and refer the reader to Randall (1968) for a photograph and description. However, since the only branchiostegid *sensu lato* addressed by Randall is *Malacanthus plumieri*, Hoese and Moore's statement must be considered somewhat dubious. *C. chrysops* was not captured in 524 trawl stations, 118 bottom longline stations, and 56 electric reel handline stations made off northern and western Yucatan during the MEXUS-GOLFO demersal fish survey cruises (Gutherz, pers. comm.). A 462 mm *C. chrysops* was taken on bottom longline by a commercial fisherman off the Louisiana coast on 24 March 1978 and brought to the attention of Texas A&M personnel. Murdy (1983) included the species in his revision of the key to Texas fishes based on this first documented capture in the northwestern Gulf of Mexico. A second specimen was taken from the same area by a commercial longliner on 11 March 1983, and forwarded to Texas A&M University. We acquired two additional specimens in the same vicinity on FRS OREGON II bottom longlines on 12-13 August 1983. Depth of capture for the four specimens (192, 155, 132, and 150 m, respectively) are deeper

than the 90-131 m depth distribution of Dooley (1978). Fishes taken on the same longline sets of the OREGON II include *Mustelis canis*, *Epinephelus flavolimbatus*, *E. niveatus*, *Hemanthias leptus*, *Etelis oculatus* and *Rhomboplites aurorubens*. Because the captures are single occurrences in conjunction with other more abundant species, it is hard to draw any conclusions about habitat preference, but the species appears to occur near hard bottom outcroppings.

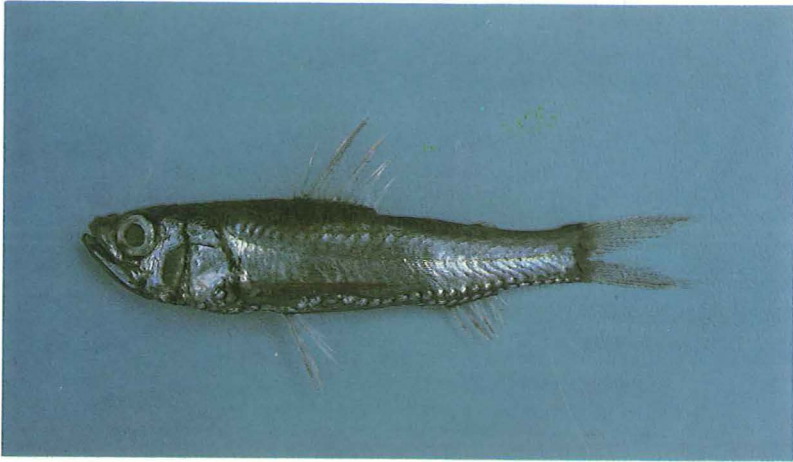
**Material Examined**

UF 38552, 1(400 mm), 27°49'N, 93°44'W, 150 m, FRS OREGON II 39539, 13 Aug. 1983; TCWC 3518.1, 1(441 mm), 27°42.2'N, 93°30.6'W, 132 m, FRS OREGON II 39537, 12 Aug. 1983; TCWC 3517.1, 1(419 mm), 27°43.5'N, 93°20'W, 155 m, 11 Mar. 1983; TCWC 2352.4, 1(462 mm), 27°44'N, 93°31'W, 192 m, 24 Mar. 1978.

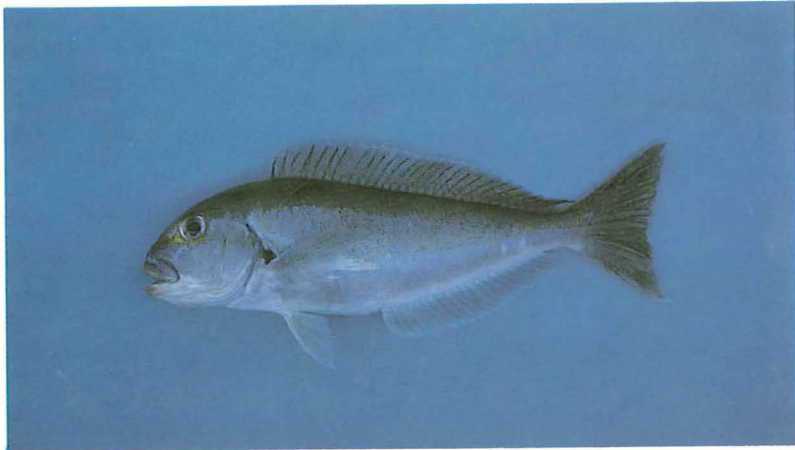
*Etelis oculatus*

Fig. 4

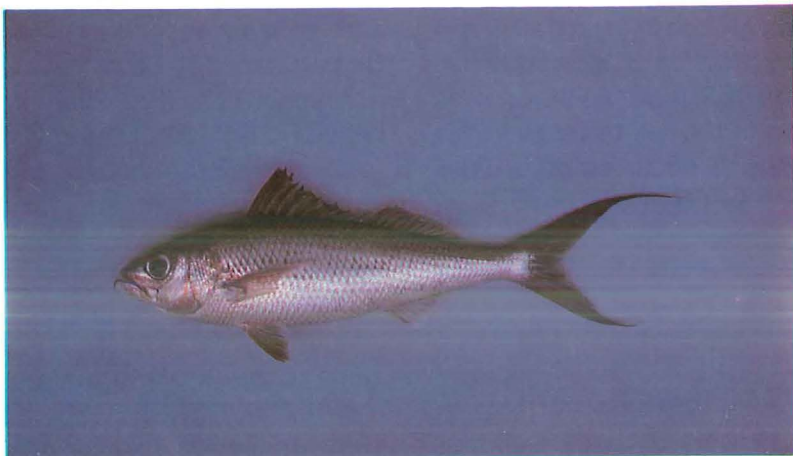
Hoese and Moore (1977) did not include *E. oculatus* (Valenciennes, 1828) in their book on the fishes of the western Gulf of Mexico, and although Vergara (1978) included Gulf waters in the distribution map for the species, he noted that it had not been collected in the northern Gulf. The first documented record (TCWC 2351.1), taken 22 March 1978 from off the Texas-Louisiana coast, served as Anderson's (1981) basis for inclusion of the Gulf of Mexico in his range for the species (pers. comm.). Murdy (1983) also included the species in his key. We were able to collect four specimens in the same vicinity using bottom longlines aboard the FRS OREGON II on 12 Aug. 1983. Marine Advisory Service Specialist Gary Graham (pers. comm.) informs us that queen snappers are taken fre-



**Figure 2.** *Neoscopelus microchir* (UF 40011), 90 mm SL, collected in the northern Gulf of Mexico (27°32.8'N, 93°, 17.1'W) in 481 m on 12 August 1983. Photo G. H. Burgess.



**Figure 3.** *Caulolatilus chrysops* (UF 38552), 400 mm SL, collected in the northern Gulf of Mexico (27°49'N, 93°44'W) in 150 m on 13 August 1983. Photo G. H. Burgess.



**Figure 4.** *Etelis oculatus* (UF 39632), 552 mm SL, collected in the northern Gulf of Mexico (27°37.6'N, 93°20.4'W) in 157 m on 12 August 1983. Photo G. H. Burgess.

quently by commercial fishermen in that area, and yields are sometimes over 200 pounds (eviscerated weight) per set. Finucane, *et al.* (1979) captured three larvae (3.6-4.9 mm) in Bongo nets on 13-14 July 1977 at 28°54'N, 94°45'W, indicating the population of *E. oculatus* in the western Gulf is reproductively active, and is not a seasonal immigrant or waif in the area. *E. oculatus* has been reported from the eastern Gulf by Darcy and Gutherz (1984); a single specimen was captured at 25°17'N, 84°05'W, in 181 m on 27 January 1978 (Gutherz, pers. comm.). Species associates at the two OREGON II stations were *Mustelus canis*, *Epinephalus flavolimbatus*, *Caulolatilus chrysops*, *Seriola rivirolana*, and *Rhomboplites aurorubens*.

#### Material Examined

UF 39632, 1(552 mm), and TCWC 3519.1, 1(690 mm), 27°37.6'N, 93°20.4'W, 150 m, FRS OREGON II 39536, 12 Aug. 1983; UF 39633, 2(385-417 mm), 27°42.2'N, 93°30.6'W, 132 m, FRS OREGON II 39537, 12 Aug. 1983; TCWC 2351.1, 1(644 mm), 27°41'N, 93°31'W, 183 m, 22 Mar. 1978.

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Janice D. Fechhelm drew the base map used in Fig. 1 and Wendy Zomlefer aided in the preparation of an earlier version of the figure. We are especially grateful of Steven Wing's tireless assistance throughout the cruise. W. Anderson and E. Gutherz reviewed the manuscript.

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