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From the Biological Faculty of the Perm State University, Perm, Russia

Results of the research cruises of FRV 'Walther Herwig' to South America. LXX. New records of two rare scorpionfishes, *Idiastion kyphos* Eschmeyer, 1965 and *Phenacoscorpius nebris* Eschmeyer, 1965 (Pisces, Scorpaenidae), from off South Brazil.*

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with 1 Table

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Kurzfassung

Ergebnisse der Forschungsreisen des FFS 'Walther Herwig' nach Südamerika. LXX. Neufunde zweier seltener Scorpaeniden-Arten vor Südbrasilien, *Idiastion kyphos* Eschmeyer, 1965 und *Phenacoscorpius nebris* Eschmeyer, 1965 (Pisces, Scorpaenidae).

Ein Exemplar von *Idiastion kyphos* und drei von *Phenacoscorpius nebris* werden als Erstnachweise für den Südwestatlantik beschrieben. In ihren morphologischen Merkmalen stimmen sie gut überein mit denen früher aus anderen Atlantikgebieten jeweils beschriebenen Exemplaren. Die Neufunde erweitern das Verbreitungsgebiet beider Arten im Westatlantik südwärts bis Südbrasilien.

Abstract

New data on the morphology and distribution of two rare scorpaenid species, *Idiastion kyphos* and *Phenacoscorpius nebris*, are given, based on one and three new records, respectively, from off southern Brazil. These Brazilian specimens agree well morphologically with the few of each species previously described from other Atlantic areas and extend the Western Atlantic distributional area of both considerably southward.

* Dedicated to Dr. Gerhard Krefft, collector of the specimens, on the occasion of his 80th birthday on 30 March 1992.

1. Introduction

Only seven specimens of *Idiastion kyphos* and ten of *Phenacoscorpius nebris* were described earlier from tropical waters of the Central Western and Eastern Atlantic and the Eastern South Atlantic (ESCHMEYER, 1965, 1969; ANDERSON *et al.*, 1975; MANDRYTSA, 1992). One more specimen of *I. kyphos* and three additional specimens of *P. nebris* were collected by FRV 'Walther Herwig' during the second fishery expedition by the Federal Republic of Germany to South America in 1968 and are described in this paper. They represent new records of both species for the Western South Atlantic.

2. Methods

Method for measurements are the terminology used in this paper follow those of ESCHMEYER (1969) and MANDRYTSA (1992).

Source of study material: ISH = Institut für Seefischerei, Hamburg.

3. Systematics

3.1 *Idiastion kyphos* Eschmeyer, 1965 (Table 1)

Idiastion kyphos. ESCHMEYER (1965: p.530-533, figs 3-5; 1969: p.53-54), ANDERSON *et al.* (1975: p.780-782).

ISH 1889-1968, 1 specimen of 117 mm SL. FRV 'W. Herwig' stat. 83/68, 1.III.1968; 25°24'S, 44°54'W, 500 m; 140' - BT.

Diagnosis

A scorpaenid species with XII, 91/2 dorsal finrays, III 5 1/2 anal finrays, without an occipital pit, with palatine teeth, 25 total vertebrae, small slit behind 4th gill arch, a complete lateral-line, and the majority of soft fin rays branched twice.

Description of ISH 1889-1968 (Measurements and counts are given in the table)

Head moderately large. Dorsal fin origin at level of the supracleithral spine. Maxillary extending to somewhat beyond midlevel of orbit. Four infraorbital bones: lacrimal bone, two suborbital bones and postorbital bone (on the sphenotic bone). Spines on head well developed; most are simple, but pterotic and suborbital spines each double-tipped, and sphenotic spine with 6-7 small sharp tips. Total spines on head: preocular, supraocular, postocular, tympanic, parietal, nuchal, sphenotic, pterotic, lower posttemporal, supracleithral, cleithral, two opercular, suborbital and preopercular spines. Ventral edge of the lacrimal bone with a sharp spine, which pointing laterally, on its third projection. Suborbital ridge with 7-8 spines: one on lacrimal bone, three on first suborbital bone and 3 (4) on second suborbital bone. One to two small sharp spines placed on lacrimal bone at the lower rim of the first (upper) pore on the infraorbital lateral line canal. Preopercular bone, with supplementary, 1st, 3rd, 4th and 5th spines. Preopercular spines gradually reduced in length from first to fifth. Opercle with 2 spines. Bony crest present in anterior to the ventral opercular spine. Anterior half of this crest is covered with ctenoid scales, but posterior half naked.

Table 1: Measurements in per cent of SL and counts for the new Western South Atlantic records of *Idiastion kyphos* and *Phenacoscopus nebris* (* counts for left/right fin)

	<i>I. kyphos</i>	<i>P. nebris</i>		
	ISH 1889-1968	ISH 1926-1968		
SL (mm)	117.0	92.0	97.0	82.5
TL	122.2	122.8	121.6	123.0
head	43.2	39.1	44.3	44.2
snout	11.1	10.3	13.4	13.3
orbit	10.8	10.7	10.3	12.7
postorbit	21.8	19.6	20.6	19.4
upper jaw	17.5	20.7	18.0	17.6
lower jaw	20.9	22.3	18.6	18.8
interorbit	9.8	5.8	5.2	6.1
predorsal	38.9	34.8	44.8	41.2
prepectoral	40.6	38.6	45.4	46.1
prepelvic	40.6	38.6	43.3	41.2
prenal	71.8	69.6	71.6	70.3
caudal peduncle length	15.4	17.9	18.6	18.2
body depth	42.3	37.0	35.1	36.4
caudal peduncle depth	10.9	8.7	8.8	7.9
dorsal fin base	49.6	50.5	46.9	42.4
1st dorsal spine	6.4	4.3	3.9	3.6
2nd dorsal spine	11.1	10.9	8.6	9.1
3rd dorsal spine	16.2	broken	13.4	broken
4th dorsal spine	15.4	broken	12.7	12.7
8th dorsal spine	9.0	8.9	8.2	broken
11th dorsal spine	6.4	6.0	6.2	broken
12th dorsal spine	10.3	10.9	10.3	10.3
pectoral fin	31.2	32.6	34.0	37.0
pelvic fin	24.4	22.8	20.6	21.2
anal fin base	13.2	14.1	11.9	12.1
1st anal spine	9.0	7.6	7.2	6.1
2nd anal spine	15.4	15.2	14.3	13.9
3rd anal spine	12.8	14.1	12.4	11.9
dorsal fin	XII 9 1/2	XII 10 1/2	XII 9 1/2	XII 9 1/2
pectoral fin *	19/18	16/16	15/16	16/16
pelvic fin	I 5	I 5	I 5	I 5
anal fin	III 5 1/2	III 5 1/2	III 5 1/2	III 5 1/2
gill rakers, left	6+1+11	5+1+12	6+1+13	6+1+14
right	6+1+11	5+1+13	6+1+12	6+1+14

Interorbital, coronal, supratemporal, postorbital, and upper posttemporal spines absent. Body, breast, pectoral fin base, upper part of head (excluding snout) and cheek covered with ctenoid scales. Several small ctenoid scales present on the lacrimal and both suborbital bones. Maxillary naked. About 48- 50 vertical scale rows.

Colour: life colour unknown. Alcohol preserves specimen pale on body, head and fins, but upper rim of the membrane from third to tenth dorsal fin spine with vaguely dark pigmentation.

Distribution: This species is known from the Caribbean Sea, off northeastern Florida, South Brazil and Angola (ESCHMEYER, 1965, 1969 ; ANDERSON *et al.*, 1975).

3.2 *Phenacoscorpius nebris* ESCHMEYER, 1965 (Table 1)

Phenacoscorpius nebris: ESCHMEYER (1965: p.523-526, fig. 1; 1969: p.52-53), MANDRYTSA (1992) ISH 1926-1968, 3 specimens of 82.5-97.0 mm SL.FRV 'W. Herwig' stat. 90/68, 2.III.1968; 24°21'S. 43°54'W, 500 m; 140'- BT.

Diagnosis

A scorpaenid species without occipital pit and palatine teeth, and with incomplete lateral-line, D XII 9 1/2, A III 5 1/2, P 16 (15-17), 25 total vertebrae and small slit behind 4th gill arch.

Description of ISH 1926-1968 specimens (Measurements and counts are given in the table)

D XII 9 1/2 (10 1/2), V I 5, A III 5 1/2, P 16 (15): first and 8th to 10th ray unbranched, but other rays branched; 8th and 9th ray the longest in pectoral fin. Soft fin rays branched onla once. Dorsal fin origin above supracleithral spine.

Maxillary extending back to level of posterior fifth of orbit. Nasal, preocular, supraocular, postocular, tympanic, parietal, nuchal, sphenotic, pterotic, lower posttemporal, supracleithral, cleithral, two opercular, suborbital and preopercular spines present and well developed. Four infraorbital bones: lacrimal, two suborbital and a postorbital one. Lacrimalbone with two spines at ventral margin: first a broad and blunt knob, second a broad spine pointing downward and rearward. Suborbital ridge with 6-7 small blunt spines: one on lacrimal bone, two on first suborbital bone, and 3-4 on second suborbital bone. Preopercular bone with supplementary 1st, 3rd, 4th and 5th spines; very small 2nd spine present only on right side of the 97 mm SL specimen. First preopercular spine the longest. Length of preopercular spines gradually reduced from first to fifth spine. Sides of body and top of head covered with ctenoid scales, as well as area above suborbital bones, and 3-4 longitudinal rows of ctenoid scales below the latter bones. Belly, pectoral fin base and lower part of cheek set with cycloid scales. Lateral-line of body incomplete, with only 2-5 tubular scales just behind the temporal canal.

Colour

Colour in life unknown. These three alcohol preserved specimens are pale on head, body and fins. A large black blotch present on area from 6th to tenth dorsal fin spine. Caudal peduncle and base of caudal fin with large, conspicuous melanophores. Broad, vaguely dark transverse bands on body below origin of dorsal fin, middle of dorsal fin, middle of dorsal fin, and between soft ray sections of dorsal and anal fins.

Distribution

Western Central and Southern Atlantic and northern Eastern Central Atlantic (ESCHMEYER, 1965, p.196; MANDRYTSA, 1992). The new Brazilian records allow the conclusion, that this species is widely distributed in tropical waters of the Western and Eastern Atlantic.

4. Remarks

The morphological features of the *I. kyphos* and *P. nebris* specimens from off southern Brazil agree well with those of the few specimens described before from other localities in the Atlantic. However, the new records of *P. nebris* show very weakly developed spines on the suborbital ridge, in contrast to former records (possibly function of size).

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6. Literature cited

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