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# Some isopods associated with Venezuelan fishes

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BUNKLEY-WILLIAMS, L., E. H. WILLIAMS, JR., AND A. K. M. BASHIRULLAH. 1998. Some isopods associated with Venezuelan fishes. *Caribb. Mar. Stud.* 6: 27-30.

Nine species of isopods (eight cymothoids: *Anilocra haemuli*, *Cymothoa excisa*, *C. oestrum*, *Glossobius hemiramphi*, *Kuna insularis*, *Livoneca redmanii*, *Livoneca* sp., and *Mothocya xenobranchia*; one aegid: *Rocinela signata*) were collected. *Micropogonias furnieri* (Sciaenidae) is a new host for *R. signata*, *Lutjanus griseus* for *C. excisa*, *Scomberomorus brasiliensis* (Scombridae) for *L. redmanii*, and *Diapterus rhombeus* (Gerreidae) for *Livoneca* sp. The geographic range of *K. insularis* is enlarged to encompass the entire continental fringe of the West Indies. *Livoneca ovalis* appears to be a temperate species occurring along the Atlantic coast of the United States of America and the Gulf of Mexico; *L. redmanii* appears to be a tropical species occurring in the West Indies and off the coast of South America. *Glossobius hemiramphi*, *K. insularis*, *L. redmanii*, and *Livoneca* sp. are reported from Venezuelan waters for the first time. *Scomberomorus maculatus* records for *L. redmanii* are probably erroneous.

L'on fit collection de neuf espèces d'isopodes (huit cymotoïdes: *Anilocra haemuli*, *Cymothoa excisa*, *C. oestrum*, *Glossobius hemiramphi*, *Kuna insularis*, *Livoneca redmanii*, *Livoneca* sp., et *Mothocya xenobranchia*; un égide: *Rocinela signata*). *Micropogonias furnieri* (Sciaenidae) est un nouvel hôte pour *R. signata*, *Lutjanus griseus* pour *C. excisa*, *Scomberomorus brasiliensis* (Scombridae) pour *L. redmanii*, et *Diapterus rhombeus* (Gerreidae) pour *Livoneca* sp. La gamme géographique de *K. insularis* est agrandie pour comprendre toute la frange continentale des Antilles. *Livoneca ovalis* paraît être une espèce tempérée qui se trouve le long de la côte atlantique des États-Unis et le Golfe du Mexique; *L. redmanii* semble être une espèce tropicale qui se trouve aux Antilles et près de la côte de l'Amérique du Sud. Pour la première fois l'on constata la présence de *Glossobius hemiramphi*, *K. insularis*, *L. redmanii*, et de *Livoneca* sp. provenant des eaux vénézuéliennes. Il se peut que les données concernant le *Scomberomorus maculatus* au sujet de *L. redmanii* ne soient pas justes.

Se hizo colección de nueve especies de isopodos (ocho cimotoides: *Anilocra haemuli*, *Cymothoa excisa*, *C. oestrum*, *Glossobius hemiramphi*, *Kuna insularis*, *Livoneca redmanii*, *Livoneca* sp., y *Mothocya xenobranchia*; un égido: *Rocinela signata*). *Micropogonias furnieri* (Sciaenidae) corresponde a un nuevo huésped por *R. signata*, *Lutjanus griseus* por *C. excisa*, *Scomberomorus brasiliensis* (Scombridae) por *L. redmanii* y *Diapterus rhombeus* (Gerreidae) por *Livoneca* sp. Se extiende la gama geográfica de *K. insularis* para comprender toda la franja continental de las Antillas. *Livoneca ovalis* parece ser una especie de clima frío que se encuentra a lo largo de la costa atlántica de los Estados Unidos y el Golfo de México; *L. redmanii* parece ser una especie tropical que se halla en las Antillas y cerca de la costa de América del Sur. Por primera vez se ha averiguado la presencia de *Glossobius hemiramphi*, *K. insularis*, *L. redmanii*, y *Livoneca* sp. procedentes de las aguas venezolanas. Es probable que son erróneos los datos acerca de *Scomberomorus maculatus* tocante a *L. redmanii*.

## Introduction

Bowman and Diaz-Ungria (1957) reported six cymothoid isopods from Venezuelan marine and freshwater fishes. Cymothoids from Venezuela

have been mentioned in a few other papers, but the only other study conducted there on parasitic isopods was an article examining attachment positions of *Anilocra laticauda* H. Milne Edwards by Bashirullah (1991).

## Materials and Methods

Bunkley-Williams and Williams examined freshly caught marine fishes in the fish markets in Cumaná in September 1992, and formalin-preserved fishes in the Marine Museum of the University of Avenida collected in the 1960s. Specimens from Bashirullah's fish parasite collections were also utilized.

## Results and Discussion

Nine species of fish parasitic isopods were found.

### *Kuna insularis* (Williams and Williams, 1985)

This isopod (Table 1) was not collected in Cumaná, but a specimen of the type host, sergeant major, *Abudefduf saxatilis* (Linnaeus) (Pomacentridae) with the characteristic wound which is diagnostic for this isopod was found (Williams and Williams 1985). This record extends the known geographic range of the isopod further east. It has been collected in Curaçao, Netherlands Antilles; the San Blas Islands, Panama (Williams and Williams 1985); and Carrie Bow Cay, Belize (Williams and Bunkley-Williams, unpubl. data). Bunkley-Williams and Williams recently examined specimens of this isopod in the U.S. National Museum Crustacean Collection (USNM 49955) which had been collected from the type host near the Dry Tortugas, Florida (8 July 1908, female-male pair). These records indicate a distribution throughout the continental shores of the West Indies for this isopod. It does not seem to occur in the insular Caribbean, although more examinations of the sergeant major are necessary before this is certain.

### *Livoneca redmanii* Leach, 1818

This isopod was seen previously on the serra Spanish mackerel, *Scomberomorus brasiliensis* Collette, Russo & Zavalla-Camin (Scombridae) in Colombia and Trinidad (Williams and Bunkley-Williams, unpubl. data). The isopod has also been reported on king mackerel,

*Scomberomorus cavalla* (Cuvier); cero, *Scomberomorus regalis* (Bloch); and Spanish mackerel, *Scomberomorus maculatus* (Mitchill) in other parts of the West Indies. Quite possibly the records of this isopod in the Spanish mackerel are based on records from the serra Spanish mackerel before this species was recognized.

Bruce (1990) revised the genus *Livoneca* and removed all of its many species except two, *L. redmanii* and *L. bowmani* Brusca, 1981. Williams and Bunkley-Williams (1996, 1999) removed *L. ovalis* (Say) from the synonymy with *L. redmanii*, proposed by Trilles (1976) and Bruce (1990), on the basis of host specificity and the strict formation of female-male pairs in *L. redmanii*, but not *L. ovalis*. These species may also be geographically isolated.

Dr Karen Burns (pers. commun.) conducted an extensive programme of capturing, tagging, and releasing mackerels along the Caribbean coast of Mexico during the last few years. She found no isopods in the gill chambers of the many thousands of mackerel. The isopod does not appear to occur in this portion of the Caribbean (Williams and Bunkley-Williams 1996). This geographic area would be of particular interest as it is possibly an area of overlap between this isopod and the more northern *L. ovalis*.

The only Caribbean record for *L. ovalis* has been in Panama [listed as *Lironeca redmanii* by Kensley and Schotte (1989)]. These specimens (USNM 66068) were examined in this study and were not found to be *L. ovalis*. This correction separates *L. ovalis* as a temperate species occurring along the Atlantic coast of the United States of America and the Gulf of Mexico from *L. redmanii* as a tropical species occurring in the Caribbean and off the coast of South America.

*Livoneca ovalis* and *L. redmanii* should be carefully reexamined and separated with adequate morphological characters, and their exact geographic ranges must be determined.

TABLE 1 — Isopods collected in marine fishes from Venezuela.

Isopod spp.	Family	Host spp.	Common name	Order	Family	No. infected/ examined	Intensity	Location in host	Locality	USNM No.
<i>Rocinela signata</i> Schœdte and Meinert	Aegidae	<i>Lutjanus analis</i> (Cuvier)	Lane snapper	Perciformes	Lutjanidae	3/12	1/5/1	Gills	Margarita Island	252664
		<i>Micropogonias furnieri</i> (Desmarest)	Roncador	"	Sciaenidae	1/5	3	Gills	Rio Seco	252665
<i>Anitocra haemuli</i> Williams and Williams	Cymothoidea	<i>Orthopristis ruber</i> (Cuvier)	Corocoro	"	Haemulidae	5/30	1	Cheek	Cumaná	—
<i>Cymothoa excisa</i> Perty	"	<i>Lutjanus analis</i> (Cuvier)	Lane snapper	"	Lutjanidae	1/14	2	Mouth	Margarita Island	252663
	"	<i>Lutjanus griseus</i> (Linnaeus)	Gray snapper	"	Lutjanidae	2/12	2	"	Margarita Island	—
<i>Cymothoa oestrum</i> (Linnaeus)	"	<i>Caranx hippos</i> (Linnaeus)	Crevalle jack	"	Carangidae	6/20	2	"	Cumaná	252667
<i>Glossobius hemiramphi</i> Williams and Williams	"	<i>Hemiramphus brasiliensis</i> (Linnaeus)	Ballyhoo	Atheriniformes	Exocoetidae	1/5	2	"	"	252662
<i>Kuna insularis</i> Williams and Williams	"	<i>Abudefduf saxatilis</i> (Linnaeus)	Sergeant major	Perciformes	Pomacentridae	1/15	2	Gills	"	—
<i>Livoneca redmani</i> Leach	"	<i>Scomberomorus brasiliensis</i> Collette et al.	Serra Spanish mackerel	"	Scombridae	1/6	2	"	"	252661
<i>Livoneca</i> sp.	"	<i>Diapterus rhombeus</i> (Cuvier)	Caitipa mojarra	"	Gerreidae	8/35	1-2	"	"	—
<i>Mothocya xenobranchia</i> Bruce	"	<i>Tylosurus crocoditis</i> (Peron and Lesueur)	Houndfish	Atheriniformes	Belonidae	1/15	2	"	"	252660

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