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Leeches of Some Fishes of the Mobile Bay Region

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SHORT PAPERS AND NOTES

LEECHES OF SOME FISHES OF THE MOBILE BAY REGION

Brackish and marine fishes (2221 specimens of 151 species) from the Mobile Bay Region were examined for parasites from March 1969 to August 1973. Fishes were collected using

seines, monofilament gill nets and trammel nets, hook and line, gigs, dip nets, rotenone, trawls, speargun, crab traps, and lift nets. They were either examined shortly after capture or held alive and examined within a day. Leeches were flattened between glass slides and preserved in 5% formalin. Williams and Gaines (1974) listed the species, numbers, and size ranges of the hosts examined. Acanthocephala from these hosts were reported by Williams and Gaines (1974) and isopods by Williams and Williams (1978). Four species of leeches were collected, representing five new host records (Table 1).

Sawyer, Lawler, and Overstreet (1975) noted a normal infestation of one to two adults (or numerous juveniles) per host for *Branchellion ravenelii* (Giard, 1850). The five specimens collected from the lesser electric ray, *Narcine brasiliensis* (Olfers) in the present study were all adults. The new host record (Gulf killfish, *Fundulus grandis* Baird and Girard) for *Malmiana philoherma* Sawyer, et. al, 1975 adds a new host family, Cyprinodontidae, to the four previously known host families (Ariidae, Carangidae, Exocoetidae, Sciaenidae). *Malmiana philoherma* seems to occur very rarely on

juvenile pompano from the south beaches of Dauphin Island. Only two specimens were recorded from thousands of pompano seined for mariculture experiments from 1969 to 1972. The body and fins of all these pompano were routinely examined for external parasites. The four leeches from the red snapper, *Lutjanus campechanus* (Poey), were probably *Trachelobdella lubrica* (Grube, 1840). Unfortunately, they were lost in the mail before this identification could be confirmed.

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TABLE 1. Leeches collected from some fishes of the Mobile Bay Region.

Parasite			Host						
Species	Number present	Position	Species	Infested		Examined		Collection locality (Date)	
				N	TL (cm)	N	TL (cm)		
<i>Branchellion ravenelii</i>	5	ventral skin	<i>Narcine brasiliensis</i> (Olfers)	1	76.3	2	31.3-76.3	Mouth of Perdido Bay (7 October 1972)	
<i>Malmiana philoherma</i>	2	skin	<i>Trachinotus carolinus</i> (Linnaeus)	2	6.8-8.3	300	3.2-29.2	South beaches, Dauphin Island (29 July 1969)	
	1	skin	<i>Fundulus grandis</i> * Baird and Girard	1	8.8	12	4.3-9.0	South beaches, Dauphin Island (10 June 1970)	
	3	gills	<i>Acipenser oxyrinchus</i> * Mitchell	1	76.0	8	49.0-104.0	Fairhope, Mobile Bay (31 January 1971)	
	1	gills	<i>Dorosoma cepedianum</i> * (Lesueur)	1	25.5	6	22.8-28.1	Fairhope, Mobile Bay (31 January 1971)	
	1	gills	<i>Dorosoma petenense</i> * (Günther)	1	17.6	10	4.9-20.2	Fairhope, Mobile Bay (31 January 1971)	
<i>Myzobdella tugubris</i>	1	gills	<i>Ictalurus furcatus</i> * (Lesueur)	1	6.4	1	6.4	The Devil's Channel, Mobile Causeway (9 April 1970)	
	3	fins & barbel bases	<i>Ictalurus punctatus</i> (Rafinesque)	1	24.0	1	24.0	Mobile Causeway, Blakeley River (4 December 1969)	
	1	branchial cavity	<i>Letostomus xanthurus</i> Lacepede	1	8.5	70	7.9-25.2	Mississippi Sound North of Dauphin Island (15 July 1969)	
	1	skin	<i>Micropogonias undulatus</i> (Linnaeus)	1	7.5	102	6.6-43.7	Mississippi Sound North of Dauphin Island (15 July 1969)	
	1	skin	<i>Mugil cephalus</i> Linnaeus	1	49.0	186	9.7-59.2	Eastern and Dauphin Island (21 August 1969)	
	1	right pectoral fin	<i>Mugil cephalus</i> Linnaeus	1	51.3	186	9.7-59.2	Mobile Causeway, Blakeley River (4 December 1969)	
	1	right pectoral fin	<i>Paralichthys lethostigma</i> Jordan and Gilbert	1	25.4	19	22.4-35.5	Mobile Causeway, Blakeley River (4 December 1969)	
	<i>Trachelobdella lubrica</i> (?)	4	gills	<i>Lutjanus campechanus</i> (Poey)	1	28.0	18	20.0-44.0	S.E. Snapper Banks off Dauphin Island (11 June 1970)

* New host records.

and Larry Johnson of Alabama Department of Conservation and Natural Resources. Appreciation is expressed to Dr. Eugene M. Burreson, Virginia Institute of Marine Sciences; and Lucy B. Williams, of the Department of Marine Sciences, University of Puerto Rico for reviewing the manuscript.

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RECYCLING FRESHLY SHUCKED OYSTER SHELLS

Oyster shells are extensively used in culture operations to collect oyster spat. Those shells are either dredged (mud shells) or weathered shells from processing plants (St. Amant, 1958). The replanting of oyster shells immediately after shucking was reported by Moore (1897), but is not currently practiced along the Gulf Coast. The purpose of this study was to determine the growth and survival of attached spat on freshly shucked shells after replanting in Biloxi Bay, Mississippi.

MATERIALS AND METHODS

Freshly shucked, Louisiana oyster shells were obtained from two seafood processing plants on the Back Bay of Biloxi on two separate occasions. The shells were held in fiberglass troughs supplied with running bay water until planted five weeks later. The numbers of shells and the numbers of spat were determined for each of the four experimental groups of shells. The spat on each group of shells were measured (greatest umbo to bill dimension) and marked with an identifying number. The numbered, plastic tags were cemented to the spat with Marine Tex® epoxy resin (Travaco Laboratories, Inc., 345 Easter Ave., Chelsea, Mass. 02150). The four experimental groups were planted on the bottom of Biloxi Bay at Point Cadet just below mean low water in 1 m² staked plots during March, 1977. The four experimental plots contained 201, 525, 527, and 532 single valves with 37, 100, 100, and 41 marked spat, respectively. Two, 1m² control plots were also established and received no shells. All plots were cleared of existing shell material prior to treatment. In addition, two experimental plots were covered with four mil polyethylene sheeting prior to the planting of the shells.

RESULTS

Eighty-six of the 278 marked spat (31%; range 20 to 42%) were recovered at the end of ten months; of these 25 or 9% (range 5-24%) of the original marked spat were recovered alive (Table 1). The surviving spat had grown an average of 29.0 mm (2.9 mm/mo.),

Of the original 1,785 shells planted, 1,372 (77%; range 60 to 106%) were recovered from the experimental plots;