Fish Lice /Gill Lice - What are they?

By Rudy Lukacovic

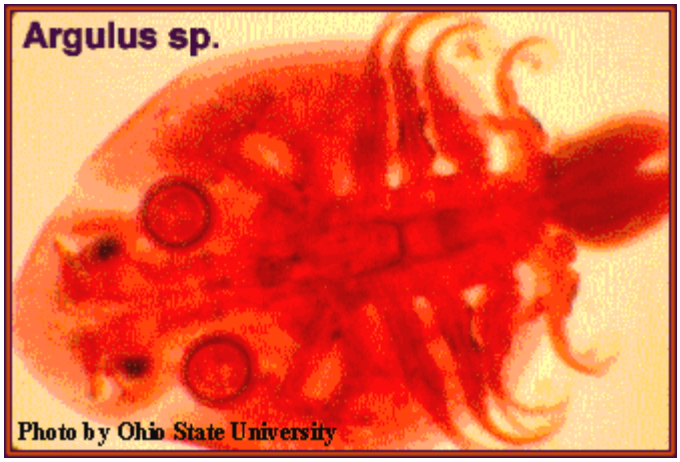
Fishermen catching striped bass (as well as other species) in Chesapeake Bay may sometimes observe external parasites on the skin or gills of the fish they land. There are numerous species of external and internal parasites that can infect striped bass and other fish. These organisms occur naturally and under most circumstances do no great harm. More than 45 species of parasites and other microorganisms have been identified from Chesapeake Bay striped bass.

The gill lice (*Ergasalis*) are the most abundant and prevalent parasite of inland and coastal marine populations of striped bass. They are a parasitic copepod. Copepods are small, sometimes microscopic, invertebrates that are members of the plankton community. Heavy infestations of *Ergasalis* have occasionally been reported from the vicinities of Baltimore, Philadelphia and Washington DC. Frequently anglers conclude that striped bass with these parasites on their gills are fish newly arrived from the ocean. In fact, the life span of *Ergasalis* actually decreases when salinity reaches marine concentrations of 32 parts per thousand (ppt). High salinity also exhibited some detrimental effect on *Ergasalis* egg survival. *Ergasalis* reproduction and infestation of striped bass takes place throughout the bay in salinities varying from 0.5 to 30 ppt. Females parasites remain attached to the gills of fish throughout the winter. *Ergasalis* egg sacs appear during January and newly attached larvae are found in April. Juvenile striped bass can become infected as early as their third month of life while still in their natal rivers. As the fish increases in size so does infection intensity. Highest counts of full sized female *Ergasalis* were seen in late April and early May and again in June and in October. In any school of striped bass, many copepods may be just on a few fish.

Different species of *Ergasalis* may be specific to each species of fish. *Ergasalis* has been reported infecting largemouth bass and bluegill sunfish in freshwater lakes in Alabama. It has also been reported from striped bass in a freshwater lake where a heavy infestation may have caused sufficient stress for a bacterial disease to become established.

Other external parasites are occasionally observed on striped bass. Two other common external parasites are *Argulus*, the fish louse, which is another copepod like *Ergasalis*, and *Lironeca*, an isopod.

Argulus, the fish louse, is small, round and flattened. It is found on the skin and scales of striped bass from August to October. Its prevalence peaks in August. The presence of Argulus on striped bass can be coincidental with the appearance of small



lesions on the base of the tail. It was also found on the skin of freshwater fish in Alabama.

Lironeca is a rather large isopod and its body is flattened top to bottom. It is commonly seen on the gills of striped bass, as well as on Atlantic menhaden and bluefish. It is mostly seen in the summer months at higher salinities.

There are numerous other parasites that are found internally in striped bass from protozoans to worms. These organisms are a normal part of environment in which all fish live. Under most circumstances they are tolerated by the fish but occasionally heavy infestations can be detrimental, leading to weakened immune systems and possible subsequent infection from bacteria and viruses.

Any concerns regarding human consumption of normal appearing fish can be addressed by proper cooking. Any disease or parasite will be killed during the normal cooking process. This does not apply to shellfish caught from areas closed due to pollution, or to finfish which are under consumption advisories because of tissue contamination. Common sense should be applied, and any abnormal appearing fish should not be eaten.