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Title

Condition of gonads in Teredo during 1939.

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CONDITION OF GONADS IN TEREDO DURING 1938

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Report for 1938.

On May 12th (surface temperature 13.5°C) and certainly began to show larvae into the water. Larvae appeared to be largely . . . During the spring, summer and autumn of 1938 some Teredo were examined every few days and the condition of the gonads or of larvae in the mantle cavity was noted. This examination started on May 23rd when the surface temperature was 15.6°C and continued until October 27th when the surface temperature was 10.2°C at the Biological Station. The Teredes were taken from wood that had been in the water near the Station and about ten specimens were examined each time. These samples were not large enough to give a very accurate measure of the development but sufficient to give a general picture.

On May 23rd and 27th and on June 1st the Teredo could be seen to have full gonads. The sperms were all active and the eggs mature. There were many more containing sperms than containing eggs and none were found containing both.

On June 3rd when the surface temperature was 17°C many of the Teredo contained young larvae varying from embryos just starting to divide to some just starting to swim although larvae in any one specimen tended to be all at the same stage. On June 6th things were much the same except that several almost spent males were found. On June 8th one Teredo contained larvae with shells about half covering them. On June 10th one contained larvae with shells almost covering them, also one contained some mature eggs but was largely spent having perhaps extruded its first lot of larvae.

On June 12th one Teredo was found which was apparently very old and had many small, white, shell-less larvae or white sperms.

the 1937 *Teredo* nearly all produced two lots of spawn, perhaps more. They produced the first and such the largest lot of spawn in late June and in July and the second lot in August.

The first 1938 *Teredo* were examined on August 5th. They were taken from a step of the ladder of the Station landing stage. This ladder had been put out during the last week of June and was now completely riddled with tunnels up to 4 cm. long. The *Teredo* examined varied in size from 0.5 cm. to 3 cm. but even the smallest contained active sperms and one of the largest had the mantle cavity filled with shelled larvae probably near spawning. All contained spawn, either eggs, sperms or larvae. There was no great change on August 11th.

On August 23rd the 1938 *Teredo* still seemed to be full of spawn but this was no longer always at one stage of development. Some contained a few fully shelled larvae near the palletes and numerous young larvae further up the cavity. Apparently the first lot of spawn had been released and a second lot was developing. On August 29th (surface temperature 19.4°C) some *Teredo* were found that still contained undeveloped eggs with shelled larvae in the mantle cavity. The remainder contained eggs, sperms or larvae all at the same stage of development in any one *Teredo*. One was actively spawning and contained only fully shelled larvae.

On September 8th (surface temperature 14.3°C) all the *Teredo* examined look clear and spent but some contained a few active sperms or shelled larvae. On September 22nd, September 26th and October 6th the *Teredo* appeared much as on September 8th except that one or two contained eggs or oocytes.

On October 14th and October 17th Teredo were examined from a piece of wood put out at the middle of August. A few of these contained small quantities of very immature eggs or oocytes or active sperms. Nearly all had gonads filled with very immature sexual products, spermatozoa and oocytes. Evidently these Teredos were too young to spawn until next year.

It is evident that many of the 1938 Teredo produced two lots of spawn before the end of the season. Others would only have time to produce one lot of spawn and those settling in August did not get big enough to produce any spawn before the water became too cold.

Prince Edward Island  
Biological Station,  
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