

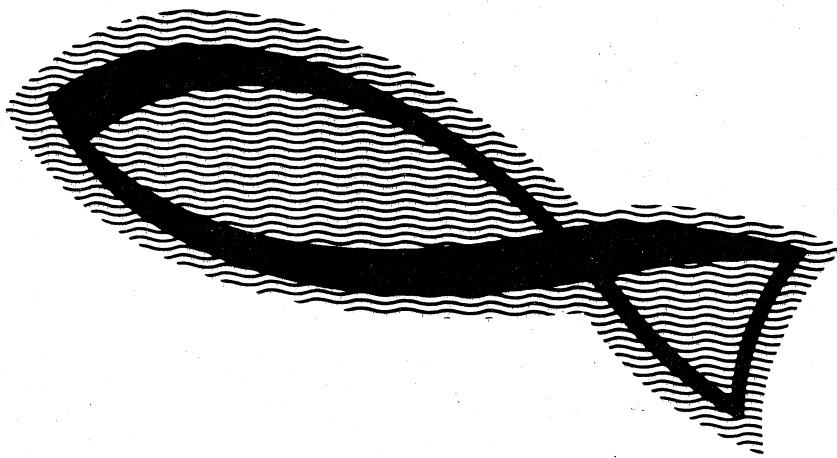


**Fishery Leaflet
Number 74**

**an roinn
talmhaíochta
agus iascaigh**

**LIBRARIAN
FISHERIES RESEARCH CENTRE,
ABBOTSTOWN,
CASTLENOCK,
Co. DUBLIN,**

**"Making more money from
Periwinkles"**



by

M. Crowley.

**DEPARTMENT OF AGRICULTURE AND FISHERIES
FISHERIES DIVISION
DUBLIN.1.**

Each year about £250,000 worth of periwinkles are picked on our shores. This makes them far and away the most valuable molluscs in our fishing industry. What is more, the value might be doubled if the catch were to be handled carefully. The fact is that, although they appear very tough the periwinkle are in some ways delicate animals and rough treatment kills many of them.

An important fact in the periwinkle industry is that the resource is a natural one which costs little to exploit. No equipment is required to harvest them because they are simply picked by hand when the tide is out.

This leaflet explains:-

1. how periwinkles live
2. how they should be collected and stored
3. and how they should be exported,

so that the fishermen can get the highest possible prices for their catches.

The periwinkle (Littorina littorea) is a marine snail found in greatest numbers in sheltered estuaries all around the coast of Ireland. It looks like the garden snail, but its black shell is much thicker and it is fitted with a lid called an "operculum". When the tide is out these animals are found withdrawn into their shells and the lid seals them in. Even though they are sealed in, they need the shelter of stones or seaweed. When the tide flows over them again they emerge (Fig 1) and graze on seaweed. They are equipped with a strong foot which enables them to travel in search of food.

Life History. Large quantities of fertilised eggs are found on rocks (Fig 2) in the spring and early summer. These hatch after five days and they remain in the water as plankton for about two weeks. Then they settle down in the 'littoral zone' (the area of land over which the tide ebbs and flows) where they

grow and spend the rest of their lives. It takes an average periwinkle about four years to reach a marketable size. Fertilized eggs are found at different times of the year in different places, but mostly from May to July.

The Periwinkle picker The traditional periwinkle picker is a member of a household living within walking distance of the shore or a river estuary. Men, women and children engage in this lucrative exercise, (the total Irish catch was worth £299,682 in 1974). They walk, with bucket and bag to the collection area, pick usually for three or four hours, during low tide hours and return home with the bags of periwinkles. As the periwinkles are found in their largest numbers near low water mark, the pickers know they must wait until the tide has ebbed for a few hours. Indeed pickers have to contend with spring and neap tides every second week and also the times of low tide may be inconvenient. For example if the low tide is 6 o'clock on a December morning the tide is flowing for a few hours before it is daylight and it will be dark again before the next low tide. Such days are not very suitable for picking periwinkles. Weather too is another hazard as when it is too cold few people want to go out picking regularly. Because of these hazards, real or imaginary, supplies are not always guaranteed.

Periwinkles should be picked into a bucket and when it is full the contents should be transferred GENTLY into an ONION SACK. Remember these are living animals and not stones (Fig 1), they should not be thrown into buckets, then thrown into onion bags, then thrown on the shoulder and thrown onto a cement floor. This is what happens only too often. It means that already the periwinkles have suffered great hardship in the first six hours after picking and they still have to survive for many days before they reach the final market. If plastic bags are used further rapid deterioration occurs.

At the end of each picking session the periwinkles should be placed in clean seawater. The intertidal zone which is their natural habitat will serve the purpose. If they are placed in the intertidal zone they will have a supply of water covering them twice a day thus ensuring no deterioration in condition.

The periwinkle buyer. This person is the second link in the chain of the periwinkle industry. He calls to the different pickers and collects their periwinkles to sell them to the exporter. As a rule the buyer must store his periwinkles for as long as a week or even two before he can collect a big enough consignment to bring to the exporter. Too many buyers store their collection in the open above high tide mark until they have a full load. This leads to the death and decay of much of the catch and lower prices for the buyer.

In the onion sacks the periwinkles are unable to get rid of their waste products. Whenever possible the buyer should remove them from the sacks and release them into a concrete holding pond which has a supply of clean sea water. His transportation should be covered-in (not open) lorries and the collection time should be minimised.

The Periwinkle exporter He is the last link in the periwinkle industry chain.

The exporter should be equipped with a covered-in holding tank where all the collected periwinkles are gently removed from their sacks, spread on the floor, and covered with clean sea water. They are thus allowed to move around and recover from any harsh treatment to which they might have been subjected. They are then graded, by grading machine, so that those over $\frac{3}{4}$ " become Class 1, between $\frac{1}{2}$ " and $\frac{3}{4}$ " Class 2 and less than $\frac{1}{2}$ " Class 3. The graded periwinkles are then placed in sacks and labeled according to their class. Classes 1 and 2 are for human consumption, whilst class 3 are sold abroad as grazers of seaweeds.

Once again they are loaded on lorries, preferably in containers cooled to 5°C

and with a minimum delay are transported to a boat. Some exporters use the "drive-on drive-off" ferry boats ensuring that the periwinkles stay at a constant temperature from the premises until off-loaded by the importer.

If these steps are followed by all concerned in this trade the periwinkle industry will improve, especially in summer when its value is highest, but also when improper handling causes high mortality and low prices.

Summary

1. Periwinkles are exported live in the shell and must be treated as living animals.
2. Periwinkle pickers should store their periwinkles in onion sacks in a place where they will be covered by every high tide.
3. The periwinkle buyer should buy regularly and be equipped with suitable transportation and holding facilities.
4. The periwinkle exporter should have a covered-in holding tank adjacent to a supply of clean sea water, he should also have a grading machine.
5. Periwinkles should preferably be exported within ten days of picking.
6. Ideally they should be transported in chilled containers at 5°C.

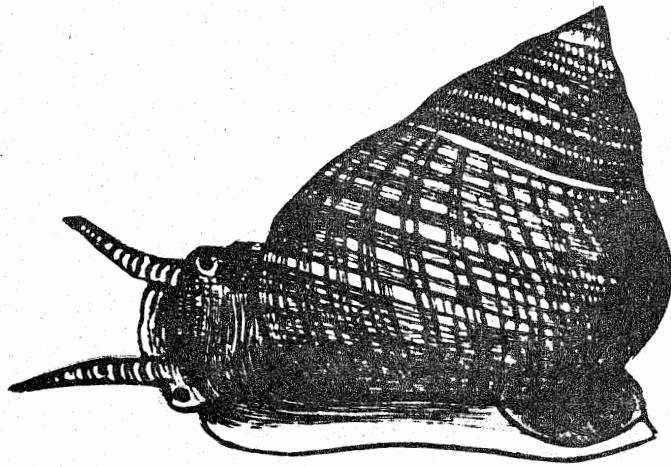


Fig.1. Periwinkle.

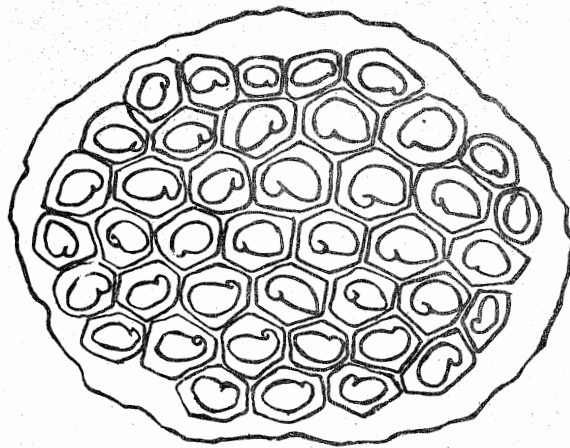


Fig.2. Eggs of Periwinkle (magnified).