

Solving the mystery of the royal blue thread

After centuries, the process of making the 'ptil techelet' has been rediscovered – and visitors to the factory facility can take part in it

• By ANN GOLDBERG

Bringing history, the Torah and mitzvot to life in a practical hands-on way is one of the great things about Israel. One of the mitzvot that has been brought back to life recently is mentioned in the third section of the Jewish prayer the Shema. Here we are told to make fringes on the corners of our garments and on these fringes there should be a *ptil techelet*, a thread of blue.

The blue – the color of the sky – is intended to connect us more closely to God. For this reason, this dye was also used to color the high priest's robes and for covering some of the vessels used in the Temple. It is one of the few permanent dyes mentioned in the Bible.

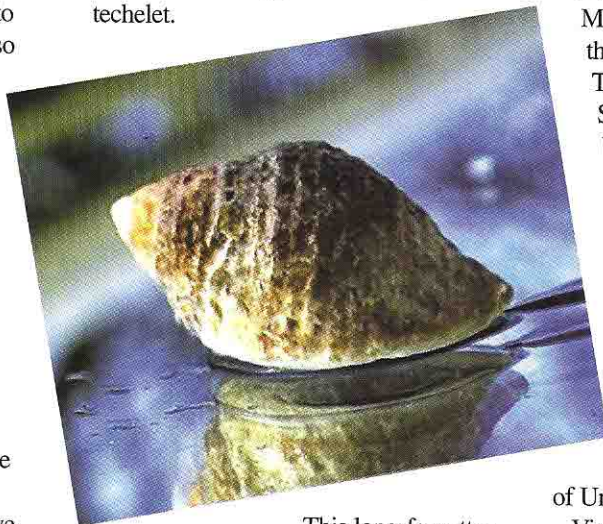
In later civilizations, blue and purple continued to have regal connotations and were the colors that signified royalty, leadership and therefore power, so the blue dyeing industry was a very big and lucrative business. The Mediterranean coast was the center of this industry because this is where the snails were found, from which the special purple/blue dye could be extracted. They were a rare species, and this rarity served to raise the price of the dye to exorbitant heights and to enhance the feeling of prestige among those who wore it.

During the Roman conquest of Israel, the rulers were a very jealous breed and couldn't bear to see anyone else wearing their royal colors, so they made a law forbidding anyone except Roman rulers to wear this color. But Jews have never allowed oppressors to stop them from obeying God's commandments, so they continued to manufacture the dye for religious use – but the techelet business had to

go into hiding.

Over the years the manufacturing of this dye seemed to have stopped, and no one knew how to make it and from what exactly it was made. It wasn't just a question of finding the right snails, although these had not been traced. But it was known that the dye extracted from these snails was a purple color and techelet was much bluer, and no one knew the process involved in changing the color. So until recently, only white tzitzit were worn.

But now we can once again be a part of the manufacturing process of techelet.



This long-forgotten mitzva is being reinstated with the help of Torah scholars, marine biologists, scientists, historians and researchers of medieval dyes.

The nonprofit organization Ptil Techelet has built a factory and visitors' center in Kfar Adumim. Here visitors can learn everything connected with the preparation of the woolen fringes for the tzitzit – from shearing the sheep, spinning and cutting the wool, to the manufacturing process and dyeing with the blue dye.

With the help of chemists, it was discovered that if the wool is soaked in the purple dye extracted from the Murex snail, a

chemical reaction takes place; when it is taken out and exposed to the air, the purple turns to blue.

The main natural site connected with the techelet story is Dor Beach, on the north Mediterranean coast, adjacent to Nachsholim, not far from Caesarea. Until Herod built the port at Caesarea, Dor was the main port in the area. This is one of the spots where marine archeologists found mounds of discarded shells of the Murex snail and identified it as being the snail (*chilazon*) mentioned in the Talmud as being used for this dye.

Similar mounds were found near other beaches farther up the coast, further strengthening the conviction that they had found the source of the ancient techelet. There is also plenty of evidence of a full-scale dyeing industry dating back to the Romans.

Large vats for dyeing were discovered with rings of blue and purple. Many of these artifacts, as well as others connected to the ancient port, can be seen at the Museum of Underwater Archeology in Nachsholim.

Visitors to the Ptil Techelet factory can try their hand at many of these processes. There is also an audiovisual presentation about the history and mystery of the techelet dye. There is also a film about the rediscovery of the ancient dye, and pre-arranged groups can process and dye the wool. Families or children over 12 can join a shallow-water snorkeling group organized by Ptil Techelet and find these snails. As this is a religious organization, participants are asked to dress accordingly. There are separate men's and women's snorkeling groups, but Ptil Techelet doesn't own the beach, so there is also general bathing going on in the same area. ■

