The water lily?s lesson

By JIM POLING, Special to Bancroft This Week

The pleasures of summer are numerous, but one of the best is passing a pond or lake edge where water lilies have made their home.These plants, with their large, flat floating leaves, are in bloom. Their dazzling white star-shaped flowers with golden centres provide a snowy coolness on summer days that have become far too hot.It's not just the beauty of the water lily blooms that catches our attention. There is no shortage of blooms at this time of year. Roadside daisies, thistle, milkweed and many others have blooms that brighten the summer landscape.Water lilies are extra special because they offer a lesson about living. It's an important lesson in these times of pandemic and the changes it is bringing to our lives.These plants have developed what scientists call evolved adaptations; special characteristics or traits that allow them to live in abnormal environments.Their broad floating leaves, and the stems that support them, have wide air spaces to hold the carbon dioxide and oxygen needed to make the plant's food through photosynthesis. Those unusually large air spaces provide buoyancy that holds the flowers and leaf pads on top of the water where they can collect sunlight and allow pollination by insects and wind.The lily pads are like solar panels that capture the sunlight needed to provide energy to the plant.The flowers open into a bowl shape when touched by the sun, and close when it begins to disappear. The petals fold over themselves when they close, making them watertight, another neat adaptation.These adaptations, evolved over centuries, have allowed the water lily to live productive lives in an unusual environment.Water lilies are not just pretty. They can be useful to humans and some other animals.Parts of the water lily are edible. Their raw leaves can be chopped and added to soups. The flower buds can be cooked or pickled. Seeds from the flowers contain protein and oil and can be ground into flour.Various societies have found medicinal uses for water lilies. The plants contain gallic and tannic acids, often used in the pharmaceutical industries. Parts of the water lily have been used in poultices, eyewashes, gargles and for a variety of minor ailments such as upset stomach.Moose are regular users of water lilies and other aquatic plants and can be seen at this time of year standing in ponds, slurping water lily pads. They are an important part of a moose diet because they have sodium content higher than woody vegetation and moose require sodium.Moose will dive to get at parts of plants growing beneath the water surface. Their large nostrils act as valves that keep water out when they go underwater. Moose are believed to be able to dive as deep as six metres.The lesson of the water lily is that to have a productive life that helps others you need to be able to adapt to changing conditions.We can't quickly change the physical aspects of our bodies. That's an evolutionary process that takes centuries.We can, however, change our thinking and our ways to adapt to a world being altered by a changing climate, increased population densities and more new diseases.