

## **The Solar-Powered Pump**

When you look at a tall tree with good green leaves on the topmost branches and it hasn't rained in a week, did you ever wonder how those leaves get their water in order to stay green?

On a nice, warm summer day, a large tree may pump over a thousand gallons – that's four tons – of water from the ground up to its leaves. The water is collected by the roots, a drop at a time. But the real work of pumping tons of water 30, 60 or 100 feet into the air comes from the top of the tree. As water is pulled toward the treetop, it passes through vessels that have negative pressure in them, pulling the water up. Negative pressure in these vessels, high in a tree, has been measured as low as negative 20 atmospheres. This very low pressure is created as water evaporates from the leaves of the tree, creating a vacant space in the vessel that must be filled with more water from below. The pump in every tree can pull water up from more than 32 feet, which is the limit for man-made pumps.

The engineering excellence and power of the silent pump that delivers water within the tree is a witness for our Creator God and against chance evolution!

### **Psalm 104:16**

**“The trees of the LORD are full [of sap]; the cedars of Lebanon, which he hath planted...”**

Prayer: Dear Father in heaven, surely even the unnoticed things of the creation bear witness to You. Help me to be a witness of Your forgiveness for us through Your Son, Jesus Christ. In His Name. Amen.