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## BOOK REVIEW

HAMMEL, H. T., SCHOLANDER, P. F.: **Osmosis and Tensile Solvent.** — Springer-Verlag, Berlin—Heidelberg—New York 1976. Pp. 133, 67 Figures. DM 24.—.

This is a four-chapter monograph trying to clear up the existing more or less obscure ideas about what it is the osmosis. In spite of being basically a physical problem this question is of great importance to a plant biologist, since the phenomena connected with osmosis play a decisive role *e.g.* in plant-water relations.

Following the history of the notions on the mechanism of osmosis the first chapter discusses different points of view and ideas ever expressed on the problem. Step by step it builds up the theory that it is the solvent tension enhanced by the thermal motion of all the molecules (*i.e.* of the solute molecules as well), which lowers the hydrostatic pressure of the solvent (*e.g.* of water). All the colligative properties of a solution like osmotic presure, lowered chemical potential of the solvent, lowered vapour pressure, boiling point elevation and freezing point depression, may be attributed to the decreased hydrostatic pressure of the solvent (water) connected with the enhanced solvent tension. Chapters two to four bring ample theoretical explanation and thermodynamical treatment of these ideas. The theory is well acceptable as far as the explanation of the biological effects of osmotic phenomena is concerned. If accepted as a general physical theory on the behaviour of the solutions, it may become one of the corner stones in the biophysics of water relations in living systems.

The book is not an easy reading since it aims high. This may appear to be its great advantage for the future.

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