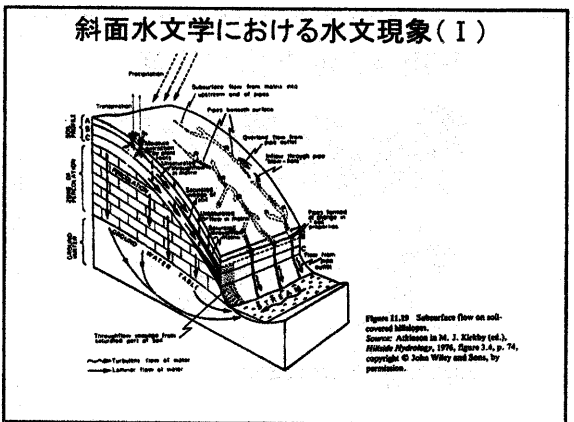
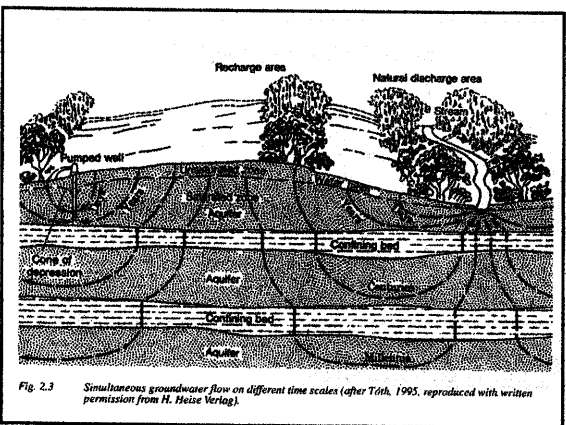
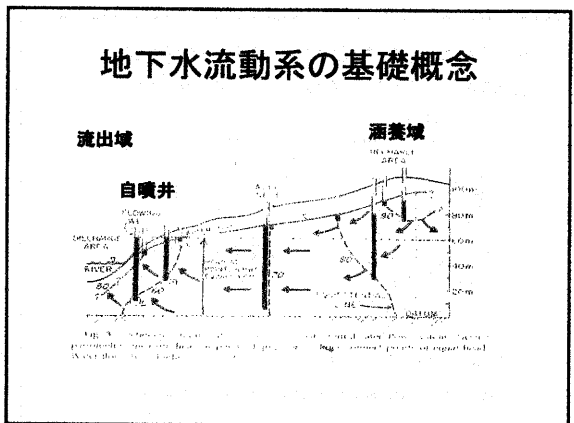
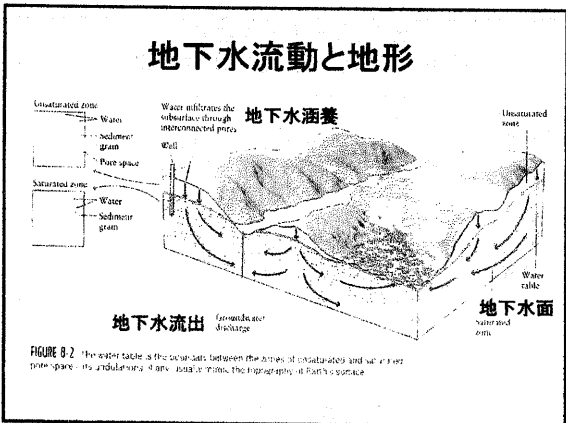
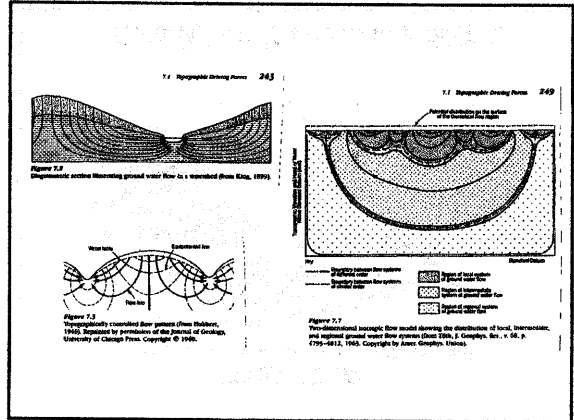


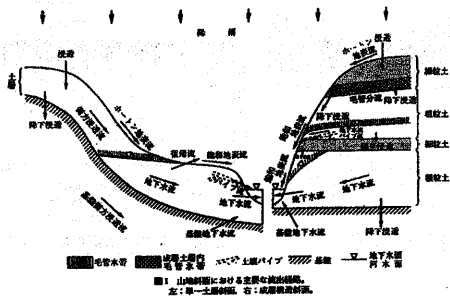
水循環の話

佐倉保夫(千葉大学理学部)

2005年5月21日 屋山シンポジウム、水循環分科会、



斜面水文学における水文現象(Ⅱ)



水理水頭 = 圧力水頭 + 位置水頭

$$h = \psi + z$$

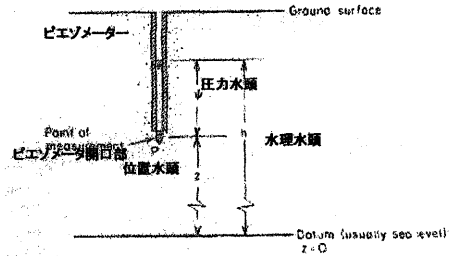


Figure 2.5 Hydraulic head h , pressure head ψ , and elevation head z for a field piezometer.

地下水の流動方程式(ダルシーの法則) $Q = Av$ $v = -K \Delta h / \Delta l$ $v = -K dh/dl$

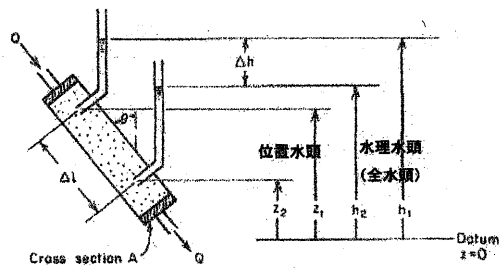


Figure 2.1 Experimental apparatus for the illustration of Darcy's law.

ピエゾメーターによる 地下水の流向・流速の測定方法

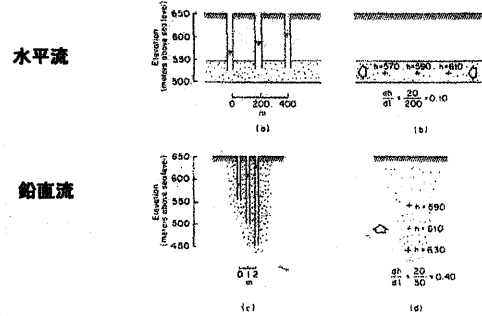


Figure 2.8 Determination of hydraulic gradients from piezometer installations.

河川水と地下水の交流

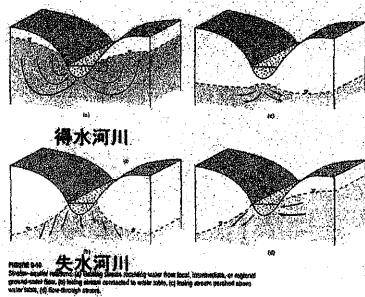


Figure 11. This view of the penetration of a groundwater flow net that leads to the formation of spring cones in a valley. (a) Gain river, (b) losing river. (c) Flow direction.

地下水による谷頭侵食

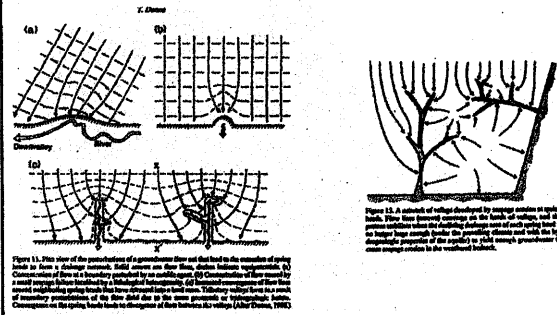


Figure 12. A network of ridges developed by spring cones in a valley. (a) Gain river, (b) losing river. (c) Flow direction.

飯岡台地の谷地形

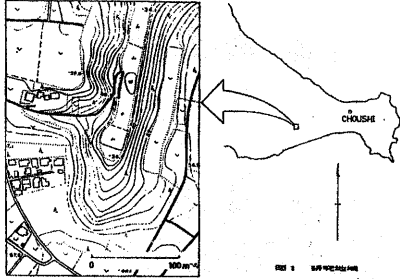


図1 研究地地図

谷頭部の動水勾配の測定

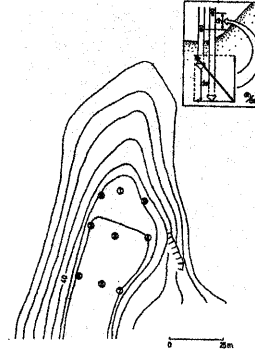


図2 センゾメーターを埋設した断面図

谷頭部の動水勾配の分布

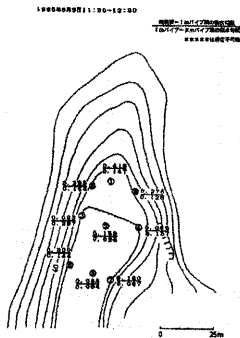


図3 動水勾配の分布

谷頭部動水勾配の季節変化

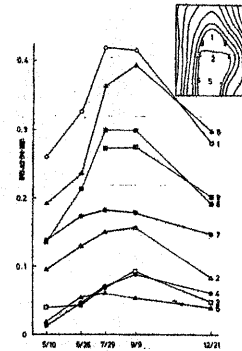


図4 動水勾配の季節変化 (地質—1のセンゾメーター用)

飯岡台地における谷頭の分布

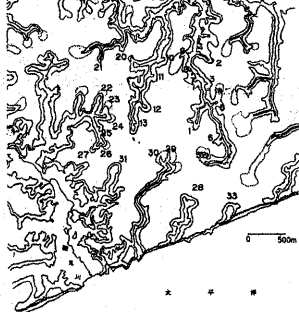


図5 谷頭分布

谷頭部の動水勾配の大きさ

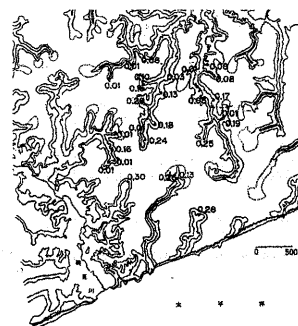


図6 動水勾配の大きさ

