

FOG DRIP: AN ANTICIPATION OF ECOLOGY

Not infrequently the modern ecologist finds, in sources antedating the rise of ecology as a science, comments which presage the type of observation now a part of ecology. Whitford (1950) writes of Thoreau as an ecologist and points out how some of his ideas foreshadowed current ecological thinking.

Gilbert White in his classic, "The Natural History of Selbourne," published in 1788 makes many salient comments which are perceptive by ecological hindsight and at one point make striking parallels to the observations of Oberlander (1956) concerning summer fog precipitation in the San Francisco area. Oberlander notes, "Here a trail or road may be dusty dry through grassland and chaparral then suddenly bog down in mud and pools of water beneath tall trees. On the crests of ridges where there is no high ground above for seepage this summer fog precipitation is most striking. The wind blows fog against the branches of the tall trees on the ridge top where it condenses and drops like rain on the ground below."

White's book is a collection of letters on his natural history observations of his parish in England and one reads as follows:

"Selbourne, Feb. 7th. 1776

Dear Sir,—In heavy fogs on elevated situation especially, trees are perfect alembics, and no one that has not attended to such matters can imagine how much water

one tree will distill in a nights time, by condensing the vapor which trickles down the twigs and boughs, so as to make the ground below quite in a float. In Newton Lane, in October 1775, on a misty day, a particular oak in leaf dropped so fast that the cartway stood in puddles and the ruts ran with water though the ground in general was dusty."

He goes on to comment upon the effect of leaf type upon the amount of water supplied and upon the effects of tree drip in keeping small ponds full upon the summit of chalk hills even during drought periods when ponds in the vales were dried up.

REFERENCES

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ROBERT P. McINTOSH

PLANT SCIENCE DEPT.
VASSAR COLLEGE
POUGHKEEPSIE, N. Y.