

## LYCOPODIUM COMPLANATUM.

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Plants sometimes disappear from certain locations and at times reappear in the same place or in a region somewhat removed from their former habitat. Either of these cases of reappearance may of course follow the usual method of reproduction *in situ* or by reproduction followed in the second case, by some form of dissemination. But at times the disappearance in a region of former growth is permanent so far as that area is concerned, due to a change of conditions which even though apparently slight or generally unnoticed makes further growth of the former plant impossible. Some plants are especially sensitive to a small change in any growth factor while other plants are not displaced even by very considerable alteration of one or more of the various conditions usually prevailing. When an attempt is made to transplant plants we find this is accomplished with no difficulty whatsoever in the case of certain species, with fair success in others, while in some species of plants transplanting without killing the specimen is only attained with great difficulty or may be totally unsuccessful.

A plant that is easily killed by a slight change in the external conditions is *Lycopodium*. It is also difficult to transplant with safety. Kerner has shown this to be true of *Lycopodium inundatum* which lived "only a short time in a garden even though the clods of peat, in which their roots are imbedded are transplanted with them."

*Lycopodium complanatum*, recently found in Monroe County, Indiana, illustrates the above mentioned points. This species is, of course, known to occur in Indiana, but never in very large quantities or very extensively in this region. About 30 years ago the writer was accustomed to observe this plant on the western slopes of several deep ravines about two miles northeast of Bloomington, Indiana. The hillsides, where it grew, were covered with deciduous trees, such as oak and beech of considerable size and which grew rather densely. No pine trees grew in that vicinity. It is not confined therefore to woods composed of trees belonging to the pine family. After some years *L. complanatum* disappeared from the above mentioned region. This was not due to animals, the removal of timber, or to other apparent reasons. The other forms of plant life thereabouts continued to grow as before in that area and there was no evidence to show in any way that the *Lycopodium* had been crowded out. It has not been found in the area referred to at any time during the past 30 years.

Three years ago a plant was brought to the writer for identification. He saw at once that it was *L. complanatum* and on inquiry was informed concerning the place where it was growing. This was found to be about eight miles northwest of the region where the writer had formerly seen the plant growing as above reported. As before men-

tioned, it grows on a western hillside in woods consisting mostly of oak and gum trees.

This plant occupies but one small area, trailing over an area about 75 feet in diameter, in the vicinity of a small sour gum tree. At present the plant does not seem to be as vigorous or as dense as when it was observed three years ago. This is apparently due in large measure to an increased crowding by other plant forms which did not prevail when first observed. It grows on private grounds and the intention is to protect it in the future. This plant therefore which is common in many places, is now rare in this county and at present is known to exist in this vicinity only in the area above mentioned.