

## NOTES ON THE POSITIVE HYDROTROPISM OF *GERRIS* *MARGINATUS* SAY AND *DINEUTES* *ASSIMILIS* AUBE.

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Wingless forms of *Gerris marginatus*, which is quite common throughout New Jersey, when removed from a pond containing some three thousand square feet of water and liberated at distances of one, two, three, four, five, six, seven, eight, and nine yards from the water, immediately made their way back to the water without hesitancy. Of course their movements, which consisted of a series of jumps, were more or less clumsy, but all started in the right direction even though purposely headed the wrong way.

When liberated at a distance of ten yards, they had some slight trouble in getting their bearings, but after making several false starts, finally wound up by going in the direction of the water. At a distance of fifteen yards, a longer time and more moving around were required before the right direction was located. At thirty and forty yards away, they seemed to lose their bearings completely and moved aimlessly about in all directions. Even at the end of an hour they were no nearer the water.

The actions of *Dineutes assimilis*, which is also quite common in New Jersey, were somewhat more interesting. These beetles, when liberated three or four feet from the water, scrambled back with difficulty owing to the character of their legs, which were not meant for locomotion on land.

At nine or ten feet from the water, after trying rather awkwardly to walk back, they rose to a height of ten or twelve feet and flew towards the pond, both with and against a slight breeze. At 75 feet from the water, they walked in all directions and then rose in irregular circles to a height of 30 feet and flew to the pond.

On several occasions, when a brisk wind was blowing from the direction of the water, they were carried inland in spite of heroic attempts to fly against it. When liberated at a quarter of a mile from the water, after an aimless existence on the ground for half a