

PLANS FOR FUTURE

Immediate:

1. By J. L. Yount

Determine the relationship of productivity to the variety and the dominance of species comprising the various communities of a spring. This is to be done as follows:

a) by observation of the numbers of species per niche in single habitats within the spring, e.g., Aufwuchs on Sagittaria blades and glass slides in different regions of the spring where productivity differs but other factors are constant. Both high and low trophic levels will be studied.

b) determine relationships as above under experimental conditions in aquaria and other vessels. Plankton and Aufwuchs are expected to serve as the principal experimental groups, but other groups may also be examined.

2. By D. K. Caldwell, F. H. Berry, and H. T. Odum during Spring and Summer.

Complete an annual cycle of fishery characteristics begun last spring as follows:

a) tag and recapture more fish

b) determine the significance of scale annuli in Silver Spring fish

c) further determine the extent of winter breeding of fishes in Silver's constant temperature waters

d) complete fecal assay of dominate fish species

e) determine growth rate of young stumpknockers in cages

f) determine the significance of length-frequency graphs of fish collected in springs throughout the year

3. By D. Natelson during Spring 1955

Compare the community composition of aquatic plants with communities not in constant temperature springs.

4. By H. T. Odum during summer 1955

a) Relate the overall community production of 20 springs measured by the downstream flow method to current velocity to test hypothesis that the overall primary productivity of communities in steady state is a function of velocity of water over plant surfaces.

b) Complete the picture of metabolism in Silver Springs by additional data on organic matter loss downstream, effects of side boils, herbivore growth, repetitions of quadrat measurements, spectrogram of water and plant ash.

Long Range Plans

1. By J. L. Yount

a) determine relationship of productivity to variety and species dominance in other aquatic habitats, both inland and marine, contrasting habitats with high productivity and low productivity.