## 2. QUALITATIVE COMPOSITION OF COMMUNITIES

### Spatial Distribution Maps

By far the most time has been spent on the initial mapping of the boils of 40 springs using compass and tape. The dominant vegetation has been plotted in position, roughly estimating the extent of plant beds. A typical map is shown in figure 5.

If as discussed below many of the springs represent steady-state environments, the conditions at any fixed place within the community represents relatively constant conditions of current, temperature, nutrient, and predator exposure. Thus horizontal spatial patterns are required in order to compare factors and organisms. The methods for estimating standing states discussed below require a map so that quadrat counts can be multiplied by the area of similar habitat.

One result that has come from this work is an idea of the stability of the vegetational parts of spring communities in Florida. Little Blue Springs, Gilchrist County was mapped a year ago. Visited 5 times since then, the pattern has been essentially the same except for a large bed of floating Najas which comes and goes primarily because of the dislodging by summer swimmers. In gross aspects these communities seem indeed stable systems.

The springs for which initial surveys and maps have been made are: Ichatucknee, Alexander, [illegible], Blue (Gilchrist Co.), Blue (Jackson Co.), Blue (Volusia Co.), Blue (Trenton), Buckhorn, Crystal River, Crystal Springs, Glen Julia, Fanning, Juniper, Lithia, Palma Ceia (dry), Poe, Ponce De Leon (Volusia Co.), Rainbow, River Sink, Rock Spring, Salt, Sanlando, Silver Glen, Sulphur, Warm Salt, Wakulla, Wekiva (Levy Co.), Wekiva (Orange Co.), Welaka, Mud, Silver, Manatee, Orange, Homosassa, Weekiwachee, Chassahowitzka, Bugg, Morrison, Bonita, Green Cove, and Su No Wa. Locations are given in Lingham et al. cited above.

### Taxonomic Composition of Dominants

As a basis for all biological studies, the major taxonomic dominants in the springs were collected at the time of the mapping. These cursory samples, representing only several hours collecting each, have been taxonomically divided and the fractions are in process of being identified. The identification of the most abundant species of higher plants, insects, and fishes are essentially completed.

Two striking results are emerging from this phase of the works

1. The spring communities seem to consist of a few species abundantly represented.

2. Almost every spring differs as to the dominant species even in cases where the chemical analyses of the major elements show essential similarity.

Examples of the living components of spring communities are given in the list in table 4.