

### XIII. DISTRIBUTION OF SPIDERS AS CORRELATED WITH ENVIRONMENTAL FACTORS\*

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#### Abstract

The observations on which this report is based were made on San Juan Island in Puget Sound during the summer of 1924. The problem in general was a study of animal communities ranging from bare rock to the moist coniferous forest region. Observations were made over a period of six weeks, a careful record of conditions was kept, and a census of the animal population made. In order that quantitative findings might be comparable, all collections were made over areas two feet square chosen within the given regions. The present report deals only with the distribution of spiders.

For this problem five regions of study were selected. On a grassy slope with outcrops of rock partially covered with lichens and mosses the following families of spiders were found: Argiopidae, Thomisidae, Attidae, Lycosidae, Drassidae and Clubionidae. Thomisidae, Lycosidae, Attidae and Drassidae, were fairly abundant in this region, gradually disappearing in the edge of the forest. Argiopidae and Clubionidae were less abundant, their numbers noticeably increasing in the woodland.

In the forest edge bracken fern and young conifers are numerous and the ground is covered with spruce needles and fallen

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bracken fronds. Here Clubionidae and Argiopidae seemed to be the dominant families, the Clubionidae being perhaps slightly more abundant. Thomisidae, Attidae, Lycosidae, and Drassidae were found here, but in diminishing numbers.

In the arid coniferous forest the dominant spiders were the Argiopidae, here found on the shrubs and trees as well as among the moss and on the herbs. Clubionidae were somewhat less numerous here than in the edge of the forest, though they were second in numbers to the Argiopidae. Uloboridae occurred in fair numbers, while only occasional specimens of Thomisidae, Attidae, Lycosidae and Drassidae were taken in this region.

Argiopidae and Clubionidae were of approximately equal occurrence among the moss of the moist coniferous forest, though in general the Clubionidae were less abundant here than in the more arid forest. Argiopidae were found in great abundance on the rose and wild currant. They were also found on the trunks of the trees.

In a region where alder growth was found among the conifers, Argiopidae and Clubionidae were numerous, though relatively less abundant than in the preceding region. Here as before, they occur in approximately equal numbers in the ground stratum, though many more Argiopidae were found on the herbs and shrubs, and on the trunks and lower branches of the trees. A few Attidae were found among the moss here.