REPLY TO: SOME ASPECTS OF MATHEMATICAL ECOLOGY
Received July 11, 1975

Using parameter estimates as bases for analyses instead of known parameters is a common problem which requires full statement and investigation. Van Valen correctly indicates that the survivorship data used in our paper (Namkoong and Roberds, 1974) is ambiguously derived. We used a set of estimates without details of their derivation and proceeded to analyze further sources of variation which we considered to be of primary interest.

Briefly, the problems with the survivorship data were the need to use a single parameter to approximate a large age class with variable behaviour and the data were taken for purposes other than those for which we used them. Foresters traditionally conceive of significant survivorship in particular ways and take census data useful for their purposes. Significant survival is rarely considered for several years following seed germination or until seedlings are clearly established above brush competition. Thus, stem size is often used to determine significant existence for commercial and reproductive purposes but census data thus determined is poorly defined for our purposes. Fritz's (1929) use of diameter classes and various statements regarding trees less than 200 years old and under the 12" DBH and 18" DBH class boundaries are not definitive but never the less indicate that more than 1,000 significant survivors were under 200 years old, including the 696 trees between 12" and 18" DBH. We interpret Bosch's (1971) data to be a reasonable estimate for a 30 acre, all-aged stand and confirmed their reasonableness with the U.S. Forest Service redwood silviculture project.

Regardless of the reasonableness of the data, the basic question remains as to whether we should ever use imprecise data to estimate future trends? We feel that since public debate had already been opened on the future of redwood stands, that some projective analyses should be made. With the available data, we could estimate survivorship parameters, and then explore the consequences of varying some of those parameters. Better data would be useful to provide probability weightings to some of the parameter variants but without better data, should we have published no analyses at all? Given the state of public discussion on redwoods, the variations in parameters we examined, and the consistency of general results, we feel that it was more desirable to publish than not to present our projections.

Literature Cited

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