

February 2, 1948

Mr. Charles L. Horn  
2300 Foshay Tower  
Minneapolis, Minnesota

Dear Mr. Horn:

An instance of the inverse relation between density and proportion of young is found in the University Arboretum, a reserve, as contrasted with Nevin Fish Hatchery marsh, a shot area only three miles south. The Arboretum for seven or eight years has hovered not far from 50% young, whereas the Fish Hatchery for four or five years has hovered near 75%.

The same inversity was originally reported by Errington although he did not call it by that name. He found that on several quail areas in Iowa and Wisconsin the percent of summer gain was high in years of low spring breeding stock and low in years of high spring breeding stock. Errington did not band his birds to prove that the summer gain was the same thing as a high proportion of young, but we have since proven it abundantly in both pheasants and quail. For these data every single bird was aged by bursa and there is no room for doubt.

My son Starker Leopold reported the same thing for Missouri quail aged by the presence or absence of buffy wing coverts. He found that year after year that the proportion of young in northern Missouri was higher than in southern Missouri, which of course compares heavily and lightly shot areas.

I am told that even the Dakotas showed a higher proportion of young pheasants when the population dropped in 1947. This, however, is word of mouth report and I do not have the actual facts. I only know they were gathered by Kimball and other competent men.

Broadly speaking, I consider this principle of inversity as the most important discovery of game research during the past decade. The interesting thing is that the projects from which its discovery originated would not have been classed as "practical" by the average Pittman-Robertson inspector or by the Fish and Wildlife Service. My conclusion is that it is the academic research work rather than the practical research work which has yielded this practical result. It is the scientific explanation of why game can be hunted at all.

We of course do not know the reasons for inversity, that is, just how exactly it works. It may work differently in different species.

Should you wish to look up any of the publications above referred to, I would be glad to furnish you exact references.

With personal regards,

Yours sincerely,

Aldo Leopold

AL:pm