UNIVERSITY OF WISCONSIN
COLLEGE OF AGRICULTURE
MADISON, WISCONSIN

DEPARTMENT OF WILDLIFE MANAGEMENT

424 University Farm Place
September 4, 1940

Dr. Paul L. Errington
Zoology Department
Iowa State College
Ames, Iowa

Dear Paul:

So as not to leave you without the requisite materials for work I am sending you a first draft of the weight table and ~~to go with~~ a suggested text for fitting it into page 13 of the manuscript as it now stands. I realize, of course, that if you reorganize the manuscript the suggested text may not fit.

My reason for expressing the weights as a table rather than as a map is that the table contains a large proportion of our own original data, or at least of data not heretofore published, whereas to make a map including the Southeastern states we would have to draw heavily upon Stoddard and others. Moreover Stoddard has already published a weight table.

The table, as you say, enables you to give references a little more conveniently than a map would.

I have no weights for Illinois and I agree that those quoted by Stoddard are not usable. My brother Frederic has some weights from west central Illinois opposite Burlington. I am pretty sure that he and Art Hawkins are planning ultimately to publish them in detail, but he might not object to kicking in the general average for this table. Should you wish to ask him whether he wants to kick in these weights, I will leave it for you to correspond with him direct.

Now about maps. I am a little reluctant to hatch in everything west to the 107th parallel because I suspect there are large areas in northeast Minnesota and northern North Dakota, also perhaps eastern Wyoming, where there are no quail and never were any. On the Wisconsin map I have entered the most northerly records in my possession and shown how the northern boundary can be drawn from them. Whether or no the dots are included in the final map does not matter, but the dots enable me to achieve at least a rough accuracy. If you have any dots at all for the northwest frontier (and you quite evidently have a number) I would suggest they be used as a guide to the hatching.

I am also puzzled as to how to extend the boundary of the regular range ~~through~~ into Nebraska. Perhaps we should put on the map the information we have and then send it to correspondents in Michigan, Minnesota, Nebraska, and the Dakotas to see whether some additional accuracy can be gained in that way.

It strikes me that my contribution to this paper is so small and my time deficit at this moment is so great that it might be wise for me to step out as co-author and concentrate what time I have on the Prairie du Sac paper. If you are willing to release me from my agreement about co-authorship, I think I would prefer it unless you have very strong preferences to the contrary.

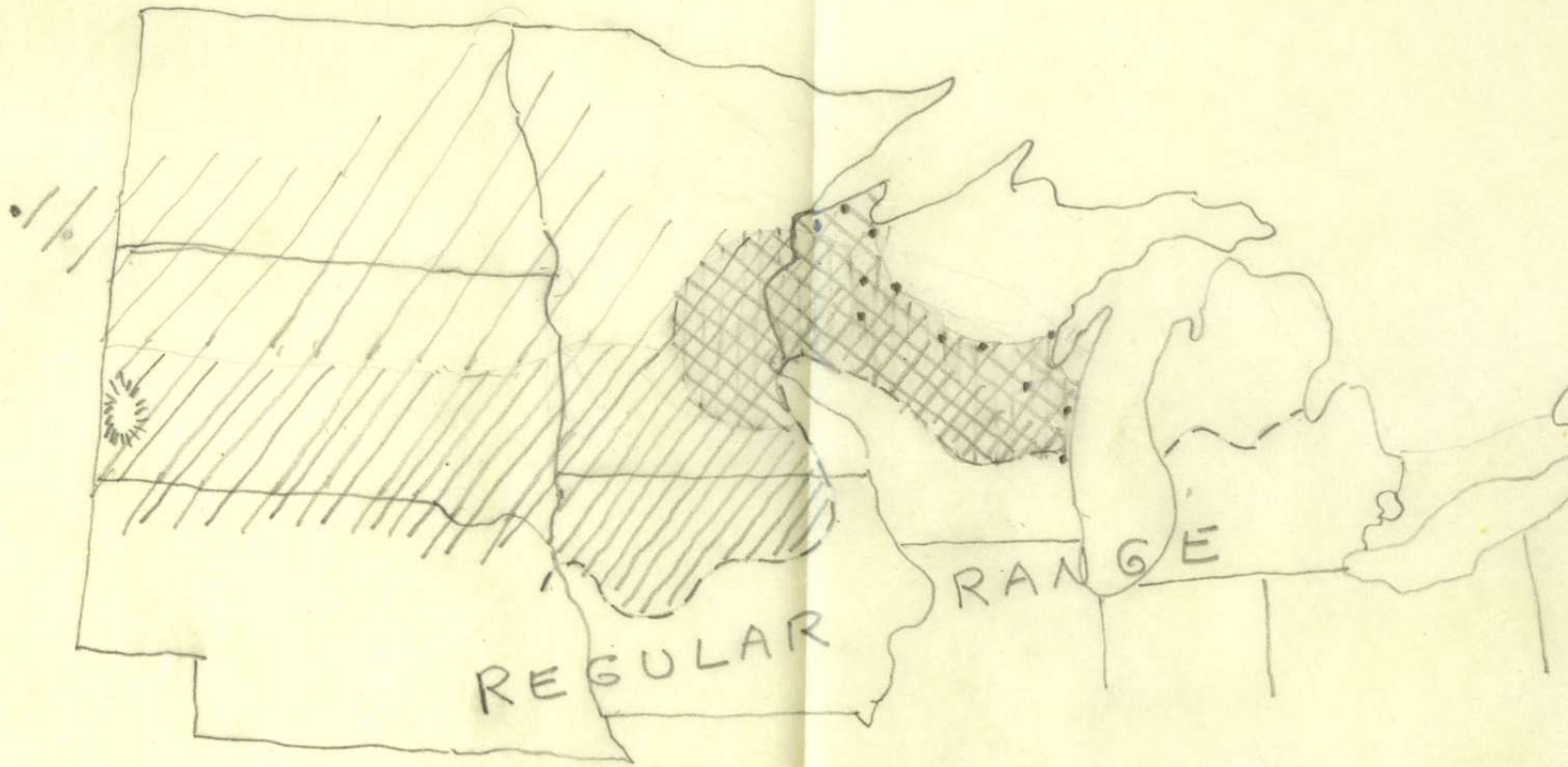
With best regards,

Sincerely yours,

ALL

Aldo Leopold
Professor of Wildlife Management

encl



Frontier Zone, Very sparse

Frontier Zone

Irruptive Zone

Northernmost occurrences of Quail

Latitudinal Increase in Winter Weights of Quail In a Series Extending up the Mississippi Valley

State	Month, year	Taken by	No. quail	Aver. weight in grams Cocks	Hens	Both sexes
(A) On "Regular Range"						
[1]Mississippi	Nov. 1929--Jan. 1931	John Ball (R.M.Carrier Preserve)	494	175	177	176
[2]Tennessee	?	C.E.Buckle Ames Plantation		?	?	182
Missouri	December 1930-1939	Aldo Leopold Ripley County	391	185	182	184
[3]Ohio	Dec. 1931--April 1932	M.B.Trautman	65	190	196	193
Southern Iowa	Nov.-Dec. 19___	P.L.Errington	287	?	?	191
Southern Wisconsin	Nov.-Dec.? 1929-1932?	P.L.Errington	77	197	196	197
"	Feb. 1937	A.S.Hawkins Jefferson Co.	28	202	206	205
(B) on "The Frontier"						
Central Wisconsin	Dec. 1934--March 1935	F.J.W.Schmidt & A.S.Hawkins	55	196	201	197

[1]Each bird weighed to nearest 1/4 ounce. Later converted to grams.
[2]From Stoddard (32:77). Figure represents "an average over a long period of years."
[3]From Wickcliff (35:356).

The "Bergman Rule," which holds that the body size of warm-blooded species is greater in the colder parts of their range than in the warmer, is well supported by the available data on bobwhite weights. Table ___ presents a latitudinal series of winter weights from the Gulf of Mexico to the "northern frontier." Only prime birds known to be in good condition were admitted to this series. Most of the birds from the southern states were shot for sport; most of those from the northern states were weighed while trapped for banding.

The series shows a progressive increase in weight as one ascents the Mississippi, although no further increase is shown as one passes north from the regular range to the "frontier." However, the frontier weights are too few in number to be conclusive on this point.

No similar series can be drawn for the Atlantic coast because of extensive admixture of non-indigenous southern stocks to the northeastern states. Phillips (27), however, measured 15 "old New England" skins and found them similar in size to Trautman's modern Ohio skins (37).

Wildlife Plantings on University Farms

An inspection of the old wildlife cover plantings on the West Hill Farm was made on August 29, 1940, in company with Orville Lee, who was in charge of the area in 1936-37.

Hog Lot. The Norway pine and white spruce plantings and hardwood shrub plantings in this area are almost an entire failure. Half a dozen spruces and half a dozen pines persist. It is uncertain whether the trees died before the area was used as a lumber yard or afterward. It is notable that this enclosure was formerly free of noxious weed and is now so full of thistle and burdock as to require mowing. The weeds very clearly came in with the disturbances caused by hauling and trampling.

Pothole. In contrast with the hog lot, this area has not been disturbed, and most of the Norway pines have overtopped the grass and will probably grow from now on. There are no weeds. The small spruces have all succumbed to rabbits. The large spruces planted by Errington about 1929 are doing well.

Woodlot. The spruces and white pines planted by McNeel about 1932 show a complete loss of the spruce due to rabbit damage, and perhaps a 10 per cent survival of the white pines. The growth and color, however, are very poor.

The small spruces planted by Lee in 1937 have mostly been lost due to rabbits.

The large Douglas firs planted by Errington have made unsatisfactory growth. The large white pines planted by Errington have made poor growth. The large spruce plantings by Errington are doing well.

General Conclusions. Spruces are inhibited by rabbits except when large stock not reachable by rabbits is used.

Norway pine, if undisturbed, will eventually top out above the extremely heavy sod found on the Hill Farm, but growth is delayed about five years by the struggle with grass. Even Norway pines are damaged by rabbits if in or near cover.

White pine is unsuitable for the Hill Farm soils and Douglas fir even more so.

Heavy sod following severe trampling by livestock excludes hardwood reproduction even after a decade of protection. Only where such sod is overtopped by goldenrod and other forbs do hardwoods come in.

A.L.