Proceedings of the Fourth Annual Conference Association of Midwest Fish and Game Commissioners

Sioux Falls, South Dakota

June 11-13, 1937

REGISTRATION AT ANNUAL MEETING OF MIDWEST ASSOCIATION
OF FISH AND GAME COMMISSIONERS, HELD AT
SIOUX FALLS, SOUTH DAKOTA, ON
JUNE 11, 12, 13, 1937

Thomas J. Lynch, Asst. Director, Dept. of Conservation, Springfield, Ill.
Logan Blizzard, Chm., Iowa Conservation Commission, McGregor, Ia
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M. L. Hutton, Conservation Director, Iowa Conservation Commission, 10th and Mulberry, Des Moines, Iowa
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Taylor W. Huston, Supt. of Game and Enforcement, Iowa Conservation Commission, Des Moines, Ia.
Everett B. Speaker, Supt. of Fisheries, Iowa Conservation Commission, Des Moines, Ia.
W. A. Burhans, Member, Iowa Conservation Commission, Burlington, Ia.
Geo. Tonkin, Regional Director, Region 4, U. S. Biological Survey, Federal Office Bldg., Des Moines, Ia.
Jesse F. Thompson, U. S. Game Management Agent, Biological Survey, Room 406, Federal Office Bldg., Des Moines, Ia.
E. V. Willard, Commissioner of Conservation, St. Paul, Minn.
Chas. McFarlane, Asst. to Commissioner of Conservation, Dept. of Conservation, St. Paul, Minn.
John R. Foley, Conservation Commissioner, Wabasha, Minn.
A. C. Hanson, Director, Game and Fish Dept., St. Paul, Minn.
Frank D. Blair, Supt. of Game Propagation and Refuges, St. Paul, Minn.
Geo. Weaver, Supt. of Fisheries, Dept. of Conservation, St. Paul, Minn.
Ray C. Steele, Supt. Upper Mississippi River Refuge, U. S. Biological Survey, Winona, Minn.
Guy R. Spencer, Member, Game, Forestation and Parks Commission, World-Herald, Omaha, Neb.
Frank B. O'Connell, Secretary and Director, Game, Forestation and Parks Commission, Lincoln, Neb.
Dr. M. M. Sullivan, Chm., Game, Parks and Forestation Commission, Spaulding, Neb.
D. W. Hulterstrum, Commissioner, Game and Fish Dept., Bismarck, N.D.
L. L. Rudrud, Deputy, Game and Fish Commissioner, Bismarck, N. D.
Burnie Maurek, Bureau of Biological Survey, Minot, N. D.
H. C. Severin, Professor of Entomology-Zoology Dept., State College, Brookings, S. D.
Verne E. Davison, Regional Biologist, Soil Conservation Service, Rapid City, S. D.
Philip A. DuMont, Refuge Manager, Sand Lake Waterfowl Refuge, Columbia, S. D.
Dr. Ferd Brown, Sioux Falls, S. D.
John N. Ball, Associate Refuge Manager, Biological Survey, Box 66, Mitchell, S. Dak.
H. W. MacKenzie, Director, Conservation Commission, Madison, Wis.
Ernest Swift, Deputy Director, Conservation Commission, Madison, Wis.
Wm. F. Grimmer, Supt. of Game Management, Conservation Commission, Madison, Wis.
Barney Devine, Chief Conservation Warden, Madison, Wis.
Ralph C. Conway, Supt. of Refuges and Public Hunting Grounds, Madison, Wis.

(Over)

Wm. Mauthe, Wisconsin Conservation Commission, Fond du Lac, Wis.
Louis Knowles, Game Management Agent, Biological Survey, Mitchell, S.D.
A. A. McCutchen, U. S. Forest Service, Denver, Colo.
Burt Horton, Commissioner, Game and Fish Commission, Sisseton, S. D.
A. M. McKay, Commissioner, Game and Fish Commission, Orient, S. D.
Karl E. Mundt, Commissioner, Game and Fish Commission, Madison, S. D.
Geo. F. Walters, Vice-Chairman, Game and Fish Commission, Edgemont, S. D.
W. B. Elley, Trapper-Warden, Dept. of Game and Fish, Hot Springs, S. D.
H. H. Deblon, Deputy Game Warden, Dept. of Game and Fish, Watertown, S. D.
C. A. Ferguson, Deputy Game Warden, Dept. of Game and Fish, Mitchell, S. D.
C. B. Gunderson, Deputy Game Warden, Dept. of Game and Fish, Yankton, S. D.

A. T. Hagen, Deputy Game Warden, Dept. of Game and Fish, Madison, S.D.
Wm. Halliday, Deputy Game Warden, Dept. of Game and Fish, Jefferson, S. D.
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MIDWEST ASSOCIATION FISH AND GAME COMMISSIONERS
FOURTH ANNUAL CONFERENCE
JUNE 11, 12, 13, 1937
CARPENTER HOTEL
SIOUX FALLS.

Mr. Johnson: The fourth annual conference of the Association of Fish and Game Commissioners will please come to order. I believe I am going to order you all up in front. Is there any reason why you should all park so far back. Come on up and take the first four or five rows.

I don't see North Dakota here yet. Dr. Hutton of Iowa tells me that his group is this side of Sioux City and will be here to take their part in the program.

I must start out with an apology and I hate to do it expecially as the fellow I am apologizing for is right here in front of me. You are going to be distressed by listening to an address of welcome from Carl Mundt, a member of the South Dakota Fish and Game Commission and who is pinch hitting for our Chief Executive, Governor Jensen.

Mr. Mundt: Mr. Chairman and fellow members of this group interested in conservation. I have been introduced in a variety of ways but never quite so bluntly and candidly as to be openly called an apology before I start. Of course I have had any number apologize for me after I have finished.

I want to speak in behalf of Governor Jensen and express as best I can his words of welcome to you and to assure you that he is not here only because of his inability to do that which we all have often wished we might do, and that is, resolve ourselves into a pair of twins and be two places at the same time. Because he did not have that ability, he has asked me to extend to you his welcome and greet you and express his interest in the problems which confront you. He is unable to be here because of a previous engagement which calls him into another part of the state.

We are glad in South Dakota to have this opportunity to entertain this organization. We have visited with you in Wisconsin, in Minnesota and in Iowa, and we are glad that you have so worked up the ladder of states and arrived at South Dakota. We are glad you are here, glad that you can see some of the sights we have. We are glad to have so many of our game wardens here, because it is impossible for us to take them with us when we go to the other states. We are glad it is our turn to serve as host to this representative group which is engaged in such a worthwhile work. Some of us follow it as a vocation - some of us as an avocation, but all of us are interested in it as American citizens.

It is difficult for me to know just what Governor Jensen would say to you. I think it is extremely unfortunate that he could not come and I think you would all be as surprized as if some

New England State Governor were to enter the room, because I am quite sure that some of you have not seen an active Republican for some time.

However I am going to read one paragraph from the inaugural address of Governor Jensen, because I believe this paragraph will interest you and the paragraph is in his own words and indicates his policy in relation to game conservation.

"South Dakota has one department of government which is unique among the states of the Union; we have the only equally balanced six-man, bi-partisan Game and Fish Commission in the Nation. The License money collected from the sportsmen of the State is intended to be spent by this Commission in a purely non-partisan manner in building up the recreational resources of South Dakota. I am a firm advocate of keeping politics out of this Department and shall rely upon this bi-partisan Commission for a purely non-partisan administration of its affairs without interference".

I think that pretty clearly expresses the sentiments of Governor Jensen and it would be well if those same sentiments were shared by some of the other governors of other states because conservation and politics make very poor bed-fellows, and it is difficult to insist upon the enforcement of conservation law when such enforcement is interfered with by a political machine.

We are proud of the set-up in South Dakota. It is possible to have this set-up because about ten years back we made it our business to get this bill through the legislature, and I believe we still retain the honor of being the only equally balanced, bi- partisan commission in the world. The plan we have worked out in South Dakota is somewhat similar to the commission form of government that is to be found in some cities or countries.

I know that it is a system which is being tried in other states. I recently visited Colorado and made some talks-I became familiar with the new set-up in Colorado. I met with their Commission which has entered its work with high enthusiasm and hope. The governor of Colorado sits with the commission and he is entitled to vote if he so desires, and I don't know of anyway to keep the governor from voting unless he should happen to lose office. Their laws are being revised and it is to be hoped that their new form of management will be a step in the right direction.

As I said before, we are glad to have you with us - we hope you can spend some time with us - get out to some of our lakes, visit some of our interesting places, make a trip to the Black Hills, and enjoy all of the sights out there.

I can assure you that you need not worry about your health. The Associated Press Dispatches have just come out with the statement that North and South Dakota are two of the best states in the Union in which to live from the standpoint of longevity. The people just don't seem to die in North Dakota. They can't rid of a governor unless they put him in jail. South Dakota is

a close second. The death rate is extremely low - it isn't just because of the good water - or the fine climate, but there is so much to live for out here that the people just refuse to die.

I hope you stay with us a long time and enjoy this healthful environment.

Mr. Johnson: Mr. George Walters is appearing on the program this morning in place of Dr. H. E. Fankhouser, Chairman of the South Dakota Fish and Game Commission. We had hoped that our Chairman would be able to appear and discuss some of the common problems which confront this organization and similar organizations. However he has delegated Mr. Walters to present this paper to you.

Mr. George I. Walters: At this fourth annual conference of Midwest Game and Fish Commissioners, we are met again to take up the 'Common Problems' incident to our organization. While it is true that these eight states comprising the organization, have many individual problems, that do not affect other states, yet we do have many problems in common, and it is for the discussion of these common problems that we are here.

There is no 'common problem' or perhaps I should say no problem of greater moment to us than the one of assisting in the preservation to posterity of some of the rapidly disappearing species of wildlife which was so abundant in this midwest region only a couple of years ago, and which, without adequate protection on the part of those who have to do with such things, must surely disappear from the face of the earth, as have several species of our wild life, and that in short order, if we do not continue to be alarmed at the conditions which confront us.

A general discussion of the common problems of this body is impossible for any one person to attempt in the short time allotted and I will only endeavor to touch on some of the high-lights, as other papers have been prepared and are ready for delivery on some of the more momentous of common problems and will be intelligently handled by those to whom the subjects have been assigned.

It would seem to me that one of the more important of common problems that we as commissioners of these eight states, and this might well include the entire United States, have to deal with, is the cooperation as between the sportsmen and the farmer. This has been and is getting to be more of a problem every day and it is very evident that we must needs soon find a simple solution therefore. It is noticeable that the farmers who are burdened with the expense of feeding and protecting our wildlife, bringing it to maturity so that we, as sportsmen, may enjoy the privilege of hunting and taking advantage of time spent in the great out of doors, are more and more resenting the idea of letting us trespass upon their lands, in too many instances causing them no small amount of grief and expense because some careless hunter has left a gate open or let down a section of fence that he may drive his car out and save himself a little mileage and time in getting to another given point that appeals to him.

Too often farmer's stock has been given an opportunity by this careless hunter to invade the fields of a neighbor; which almost invariably causes a misunderstanding between them that often leads to expensive litigation in court, when both were ignorant of the facts and were innocent. Had this careless hunter given his action a moment's serious thought, he would have avoided any misunderstanding between these two good neighbors who had probably lived at peace as neighbors for a lifetime.

Are we giving this problem serious consideration and what are we going to do about it? There is no question but what the farmer is being imposed upon by so-called sportsmen in many instances. How much better it would be if we could prevail upon all hunters and fisherman alike to go to the farmer and get his permission to enter upon his lands. He would be appraised of who was there and might possibly be willing to impart information that would make the sport of hunting or fishing a simpler proposition for the sportsman, as the farmer would be in a position to know where there was a concentration of game or where the better fishing waters were located and could direct one to them without having his land and growing or unharvested crops trampled over by a hoard of trespassers, saving himself much in grief and actual cash.

Not all farmers are like that one out in western Nebrasks, near Crawford, who put up signs reading something like this. 'There is game here, hunt all you dam please and come to dinner when the dinner bell rings, but be sure to close all gates'. You can be assurred that this man's place was almost a sacred spot to hunters who were put on their honor to respect this farmer's rights and those who did hunt there stood ready to protect the spot to the best of their ability. Of course this is but an isolated case that stands out in a novel way, of a farmer protecting himself and it might not work as a general panacea over an entire state or region and there are not too many farmers who have much confidence in signs or the common run of hunters.

Another common problem that is serious is the one of uniform laws and regulations as between adjoining states. More and more we are affecting regulations that cover this field and as a result the different states are enjoying a better relationship along the lines of sporting matters and some day reciprocal agreements will be reached whereby sportsmen residing along dividing lines of states will feel that they are privileged to cross the line to do a little hunting or fishing without running a foul of the law.

I believe the most serious common problem we have however and one that is right now demanding a solution is 'the small boy and the 22 rifle'. There are but few small boys who do not have a hankering for a gun and generally that first gun is a 22 rifle, a present from a sympathetic dad, who had the same hankering when he was a small boy. On the presentation of the rifle, does the 'sympathetic' dad see to it that the little man is given the proper instruction in the handling of the rifle, go with him to field as often as possible to see that he gets the proper training or does he just hand him the rifle and let

nature take its course. In far too many instances the boy is left to his own devices and on his trips afield, his desire is to shoot something and it matters not what it is, whether a tin can, a knot in a post, any small animal or any kind of a bird, just so it makes a good target. Little does he dream of the damage that he might do with his seemingly harmless 22 and in thousands of instances, farm livestock has been killed by a shot from a 22 in the hands of a small boy and the farmer owner, not knowing the facts in the case has vowed eternal vengeance on all farmers alike and posted his lands against trespassing. Nor is this all the damage done by a 22 in the hands of a small, inexperienced boy. Hundreds of accidents are reported wherein someone has been accidentally shot by some small boy with a 22 rifle, and in many instances, these accidents prove fatal. Is the boy altogether to blame for this. No, he is not. Had he had the proper guidance when he first received his treasured gun and his dad or some other person accompanied him on his trips afield to see that he knew what to shoot at and when, conditions would have been much different, he would have learned when it was right to shoot and when not to shoot.

Many of the aforesaid accidents and the loss of many a nice hunting spot to good sportsmen would not have happened. I believe the answer to this common problem is the educational program as fostered in some of the states as among its game wardens, who must needs go out among these boys and make it their business to instruct them whenever they have the opportunity, in the handling of firearms, also under what conditions it is safe or proper to shoot and when it is not safe, explaining to the young mind the reason why, as they will ask questions and these questions are sometimes hard to answer, but they should be answered and explained in the minutest detail.

Another problem that confronts us just now is the matter of winter feeding of game birds. Not all of us see alike in this matter and not all of us are so situated that we could put on and extensive feeding program, should we so desire. The last couple of winters have taken a large toll from among our upland game birds, owing to the scarcity of feed and the deep snows which have come late in the winter when the birds were in poor condition. Unnumbered birds have perished in these storms both from lack of feed and also the lack of cover, but what to do about it.

There are none of us who would stand idly by and see our upland birds become extinct or brought to the point of extinction for the want of a little food scattered here and there during a time when it is impossible for them to forage for themselves, yet on the other hand if we encourage an extensive hit or miss program of promiscuously feeding the birds at the first approach of winter, what will be the result. Who of the many volunteers is not going to become weary of carrying on the program of feeding day after day throughout the winter.

Once started and birds get used to the procedure, will they have the instinct or stamina to go out and hustle for themselves as is

their natural tendency in the wild. I believe it would be far better were we to make arrangements with a few farmers in every locality to leave a few shocks of grain here and there, or better still, leave some small marginal spaces uncut so that the birds will have a place, not only to feed, but also have cover which they sorely need in case of severe storms. This is a matter for discussion and should have our very serious consideration, so that we might arrive at the best solution of the problem.

Lack of time does not permit me to go further into this discussion and in closing I want to read a little jingle that came to my mind when preparing this paper and I am dedicating it to the good fellow commissioners from our neighboring state of Nebraska, where it was my extreme pleasure to spend my boyhood days.

FISHING ON THE BLUE

Should you wish for a diversion,
From you cares and worries too
Just pack up your equipment
And go fishing on the Blue

There the channel cat are scrappy
And they'll prove your metal too
They'll fill your heart with happiness
When you're fishing on the Blue

There are suckers, chubb and red horse
Now and then a turtle too
That takes you bait and beats it
When you're fishing on the Blue

The farmers won't revile you
If you buy a hen for stew
For one great big picnic dinner
When you're fishing on the Blue

O'Connell, Sullivan and Spencer,
And the other members took
How you fellows would enjoy it
If' you'd go Fishing on the Blue

Take a tip from one who's lived it
Who's enjoyed it through and through
And you'll forget these common problems
When you're fishing on the Blue.

Mr. Johnson: We come now to the other part of the program; which is of the greatest importance, and I am happy to announce that conditions so far as water fowl in South Dakota are concerned they are looking up. We met in Wisconsin a year ago and some said we had to go there to see it rain. If my memory serves me right, it rained both days we were in Madison, but we have had lots of rain in South Dakota this spring. I think we can back up what I said about conditions looking up and when South Dakota is permitted to make its report on the duck census

this spring you are going to think we are damn liars.

It leads me to another conclusion too, and that is that the ducks don't want to go across into Canada. If there is plenty ofwater here they will stay here, that is why they are here this year.

I believe that in too many instances distorted facts have been presented and these have resulted in a lot of restrictions, some of which were non-essential.

I am reminded of a photograph which was sent me by Ex-Governor Taylor of Mississippi during the time we were after restrictions on duck shooting in 1934 - 35 - 36. He sent me a picture in 1934 showing a scene on the back waters of the Missouri, and it was supposed to prove there was no scarcity of ducks. These waters were just black with mallards, but the picture showed me something more than that. It proved to me that the ducks were concentrated there because there was plenty of water. We had no water in South Dakota.

The danger of overshooting this fall will be remote because the ducks will have plenty of places to go. But before I get started on this I want to pass out these registration cards. Write your name and address. Whether you are here officially, or as a friend of the cause. We want to get all this information. I see our friend Bernie Mansek has just come in, late as usual.

Also, I believe we will follow a little different policy this year in finally boiling down our deliberations. I am going to ask each State to name one member of its group to act as a member of the Resolutions Committee. They will make up a Committee of seven and such members can make notes of the deliberations as the program progresses, and then when we get to the general discussion on the program this afternoon that general discussion will bring out a crystalized opinion as to whether we should have a 30 day season, live decoys, etc., and then when the committee retires to make its formal deliberations and to adopt formal resolutions, they will have the information at hand.

We will be in early enough so that the recommendations of this body can be sent Air Mail and be in Washington on Monday in plenty of time. I believe in this manner we can avoid discussing the resolutions to a great extent from the convention floor. If that doesn't meet with your approval, I would be glad to have your suggestions. Apparently it does, so I will ask the following men to serve on the Committee:

Mr. Chas. McFarlane - Minnesota
Mr. Ernest Swift - Wisconsin
Mr. George Walters - South Dakota
Mr. D. W. Hulterstrom - North Dakota
Mr. M. L. Hutton - Iowa
Mr. M. M. Sullivan - Nebraska
Mr. T. J. Lynch - Illinois

Now, Mr. Thompson of Illinois could not come to discuss this matter of arbitrary zoning, but he has sent us Mr. T. J. Lynch, Assistant Director, and we will hear from him.

I am going to ask Mr. O'Connell to come to the chair. This is in line with a tradition which we have established and I believe we should follow tradition. I will ask Mr. O'Connell to take charge.

I also want to tell you about this gavel. This is made from Iowa black walnut and I am having a gold band made of Black Hills gold to go around it. My son, who is attending school at Brookings, turned it out for me and so you see there is sentiment attached to it as well as utility.

Dr. Ferd Brown of the Izaak Walton League has arranged for 5 or 10 minutes of time over local radio station K500 so if some of our distinguished visitors wish to put out a little propaganda, we shall be glad to have you boost our program. The local station gives generously of its time to Conservation activities and we would be proud to have some of our visitors talk to the sportsmen in this locality.

We are just 10 minutes behind schedule so we are not so badly off. We are going to change the program a little but at 3:30 we are supposed to discuss the formal recommendations of the Conference, but we will defer that until morning. That will bring us to Mr. Tonkin and Mr. Adams and we will hear them before we have the general discussion so that the Committee may have all of the information before it.

We now come to a new member of our organization - Mr. D. W. Hulterstrom of North Dakota. We know of his good record of Conservation and we all are familiar with his name. We are glad to welcome him and he is going to discuss the 1937 duck crop in the Prairie Region.

Mr. Hulterstrom: I am going to ask Mr. L. L. Rudrud to discuss this as he is more familiar with the matter.

Mr. Rudrud: Mr. Johnson and fellow members of the Association. I have heard a few remarks here this morning about politics and particularly in regard to South Dakota's wonderful set up and how it is bi-partisan and free from politics.

I am going to disgress from my subject for a few moments and tell you something of North Dakota. North Dakota appeared in the lime light this year in setting up a 5 man game commission but it fell though.

North Dakota could without doubt have had five man game commission included in its present set up but when the bill was being discussed it was proposed to have incorporated, qualifications necessary for those men who would conduct the Fish Game Commission to measure up to. The legislature refused.

We begged the sponsors of the bill to state these qualifications to set out some kind of qualifications, that it would be

necessary for those who would take part in the Department work to measure up to, so we might have some assurance that the 5 man game commission would provide North Dakota with a better set up. We were not granted that privilege. We asked that the Commissioners be elected by the people of North Dakota on a "No Party" ballot and the answer was "absolutely no". That is what we got from the sponsors of the bill. We we went ahead and defended our present set up because we are convinced that no matter whether it is a 5 man or a 1 man Game Commission, if you haven't got the right kind of men in office, you will not have the right kind of a Commission or any other division of the state. We have all seen cities with Commission forms of Government, with other forms of Gorernment, and it is not the question of the form of Government so much as it is a question of the kind of men we have. In the State of North Dakota our Commission is putting forth every effort to shove politics onto the sidelines when it comes to the Conservation of game and the enforcement of law. We are just as much interested in throwing politics to the 4 winds when it comes to wild life as anyone and we have adopted the slogan that ducks and geese, chubbs and pheasants con't vote in North Dakota.

I wanted to mention that because it was before the State legislature last winter as to whether a change would be made. The change would have been made, provided the bill had incorporated the qualifications, and those who introduced the bill in Committees were begged to incorporate the qualifications in the bill or State, that no man could be placed in the department until we were certain he knew something about the work.

Now Mr. Johnson just mentioned here a few moments ago something about the duck situation in South Dakota. That is absolutely true in North Dakota. The duck situation in North Dakota is unbelievable when it is compared with 1933-34-35-36. At that, we haven't in North Dakota anywhere near as many ducks as we had years ago. Of course we had a drouth in North Dakota but to anyone who has not lived through it the situation today is beyond the modest imagination.

I made the remark while driving down here. We had the Commissioners little boy with us and every pot hole and pond seemed filled with water. He said, "There is quite a body of water" ~~right now~~) and I said, "Yes, that is a nice body of water right now, but if we go back to the 1933 annual report we will find that this place was dry and where there now is a body of water, it was pictured as "foot prints in a North Dakota Lake Bed."

In that same area of land is one of our alkali slues of North Dakota and there are ducks there. There are ducks everywhere in North Dakota. There are more ducks in the Red River Valley and its watershed than in the western part of the State. I believe the reason for that is that we secured any amount of rain, in fact too much rain, in the Eastern part of the State, early this year, while a large part of the Western half of the State did not receive any rain until about a week ago. We did, however, have an abundance of snow in North Dakota, and

while it did leave a little moisture along the highways that was all until the recent rains, so it only is natural we should see more ducks in the Eastern part of the State.

There are ducks everywhere that there is water. A week ago they had 4.19 inches of rain at Bismark. Now we have water in every slue and pot hole excepting even in those that are clear alkali and in which no vegetation will grow for feeding. We do have a few that were as white as this floor until we got the rain. In that clear water there is no vegetation but the birds adapt themselves to their environment. I might say that where there is water for a duck to live on you will find ducks. We have as near as I can gather an abundance of pin tails. I may be called in this but I would say our crop comes about as follows:- pintails, first; shovelers, next; mallards, next; then widgeon and teal.

In the early spring we had quite a few sculps, canvas back and redheads, but these seem to have gone somewhere else to do their nesting. That is at best the larger part of them have. I would suggest that of all our ducks, the ruddy duck should be placed on the absolute protected list. We have a few of those in North Dakota but they are very very few and I don't know of anything that looks any more beautiful than a few ruddy ducks on a lake. Possibly I am prejudiced because my name is Rudrud and more often than not it is just "Ruddy."

In order to get a better angle on the duck situation in our drive south from Bismark we did not come straight down but angled east to Fargo, crossed over into Minnesota and came down that way and I must say my hat is off to Minnesota in regard to ducks.

There were more ducks down the east side of the Red River in Minnesota than I have ever seen in any part of our State. We were driving along a field near Lake Beaton in Minnesota when we noticed a cock of hay left there from last year. When we first noticed it this haycock was just covered with little ducklings that was only one isolated cove near Lake Beaton.

It is a pleasure to see those things. It is a pleasure to realize that after all we have tried to do by building dams, creating lakes, conserving water, putting water where there never was water before; while we were able to accomplish some things, all our work is mighty mighty small when compared to the Good Lord's rain, and when it starts to fall, things begin to come back very rapidly indeed.

I don't want to belittle all the efforts of this group or any other group, not at all gentlemen, but nature seems to be able to take care of her own problems better than all of us combined.

Last spring we had more geese in North Dakota than we have had in 15 years. The Red River Valley was alive with geese. It was a mighty hard job to make the boys keep their fingers off the trigger last spring.

We had any amount of violations up in North Dakota. Thanks to the Biological Survey we got some U.S. men up there and they worked in conjunction with the local wardens, made some arrests and had some mighty tough going on account of the rains. It was almost impossible to get off the graveled roads to the side roads but it was mighty nice to have this help.

I have no figures available to show the number of convictions for goose violations but there was a goodly number of them.

The geese were what we commonly call "honkers" or Canadian grays and snow geese and were there by the thousands.

There is a question I would like to ask and have answered. What becomes of all these snow geese in the fall of the year? We can see thousands and thousands in the spring and they spend some time with us but we never see snow geese in the fall, they are never shot in the fall. They go up but don't seem to come back. Of course we know that they do but there is no snow goose shooting and there are very few snow geese seen. It is a peculiar thing.

We have a little magazine in North Dakota put out thel by the Fish and Game Commission called North Dakota Outdoors. In the May issue the department asked for the cooperation of all sportsmen in letting us know the situation at to migratory fowl in this particular section. We wanted the personal opinion of the hunter. We received a large number of answers and I am going to read just a few of those answers. These are not our words but what we received throu h the mail.

Dear Sir--

In the May issue of N. D. Outdoors, you asked all readers to give their comparison of the number of ducks and geese with other years.

I have seen more geese this year than in the past five years. Many of them seem to stay aroung longer than in former years.

The ducks seem to be the same with very few nests found.

I like the new improvements in the last two issues.

Yours sincerely,
Ralph Scott
Spiritwood, N. Dak.

Lankin, N.D.
5-19-37

State Game & Fish Dept.,
Dear Sir:

In regard to the duck and geese flight this spring there were more ducks and geese passed over here than we have seen in fifteen years or more. I hope they come back this way.

Yours,
V. L. Ross

Dahlen N. D.
May 15th, 1937

Sirs:

Referring to the goose and duck situation, I have been a residenceof this state for over ten years and must say this has been the first time in that many years that I have seen so many geese pass over on their northward flight. As for ducks, there has been considerable but below normal through this section.

Will you kindly have the district game warden drop in or send me his address, I am in need of a few fishing license's.

Yours truly,
G. S. Walker.

Velva, North Dakota,
May 17, 1937

North Dakota Outdoors
Bismark, N. Dak.

Gentlemen:
In reply to your May Outdoors, I wish to state that for the last five years past I haven't seen so many ducks as I have this spring. It seems wherever there is a little water I find ducks, and mostly Mallards. Never before have I seen so many Canvass Backs around here in the spring as this year. Besides there are Blue wing, and Green wing Teal, lot of spoon bills, and Pintails, If these potholes stay filled with water, we will have quite a few ducks by fall.

Yours truly,
N. J. Krebsbach
Velva, N. Dak.

Ellendale, N. Dak.
5/15/37

Dear Sirs:
The ducks and geese during the migration were only about 10% of normal this spring. Reason: lack of feed. Ducks remaining here for nesting two or three times as many as in 34, 34 and 36, but not as many as normal. Seem be be mostly Pintails-very few mallards where normally we have always had a good hatch of mallards. We usually have thousands of geese here in the spring but this year there were really very few that even flew over this territory.

Very truly yours,
Edwin Leiby

By the way there is a peculiar angle to this last report. The gentleman who sent this statement in to us deluged us with requests for feed for pheasants. Sometime later he came out in the Fargo Forum with a statement to the effect that he had only been able to receive $15 from the Government to feed the birds. He really gave it to us and all the time the Commission was sitting with a receipt for $15 and another for $50 for feed for this county and we couldn't do a thing because if we had published it every county in the State would have been after us to get $65 so we had to grit our teeth and bear it.

Now over near Hankinson we had another gentleman interested in hunting. He sent us this report covering the same region.

Hankinson, North Dakota,
5/8, '37

Ducks found in every slough and pothole this year, more than in many years.

Larger flocks of geese reported than seen in the past ten years at least. Some spring shooting.

Pheasants seem to have suffered considerably this past winter; fewer seen this spring than the last few years.

Rev. J. P. Klausler.

We prefer to take the preachers word for it.

May 15, 1937

D. H. Hulterstrom,
Game & Fish Comm.,
Bismarck, N. Dak.

Dear Sir:
In looking over this last issue of "Outdoors", I note that you are asking for a comparison of the amount of wildfowl this year with that of 5 or 10 years ago.

I have hunted in this country for the past twenty years and have seen the slow depletion of our wildfowl.

In making my comparisons I will go back about 5 years. In 1932 we still had very good duck hunting around here. In 1933 the drouth hit us and shooting tapered off considerably due to the lack of feeding grounds and lack of water. In 1934 and 1935 there was absolutely no duck hunting in this territory. I account for this as being due to the fact that the ducks did not breed here in the spring, because the sloughs and potholes were all dried up.

This past winter we had a great deal of snow and I find that a great many of the sloughs, which had been dry in previous years, now have a considerable amount of water and I would

say that we have 75% more ducks in this territory, which are breeding here, than we had from the years 1933-34-35-36. This may seem like a large percentage, but when you stop and consider that in those years practically all sloughs were dry, I think that the percentage given is quite accurate.

Yours very truly,
Sharpe Fruetz, Ass't Cashier,
First State Bank
Fredonia, North Dakota.

There is something else I believe that we should do in this work and that is we should interest the younger generation. In the State of North Dakota we have an organization called the Junior Game Wardens. It consists of boys from 10 to 20 years of age, also girls.

Just because the title is Junior Game Wardens, don't think we educate those boys and girls to be tattle tales and have them write us letters telling us this or that about some other boy or girl, or some sportsman. We try to teach them something about the game and wild life in North Dakota. They are not wardens in the sense of the word that they are to go out and get some one, but wardens wo are learning to take care of themselves. They are wardens who, when they go out with a 22 rifle and the high power shells we have today, will not do the damage we did with our rifles and the old-fashioned ammunition and I know I did plenty in my time. Here is a letter from one of these wardens:

Bowden, No. Dak.
May 23, 1937

State Game and Fish Dep't,
Bismarck, N. Dak.

Dear Sir:
In answer to you question in Dakota Outdoors. I have seen two flocks of geese going over with about 87 in one bunch and 40 in the other bunch and I have seen about 100 ducks around here this spring.

There are a few pheasants left here but lots of Jack rabbits. I would like to ask you a question, it is, can people hunt rabbits on a game refuge.

Yours truly
Marcus Monk.

Here is another letter from a Junior Warden.

Fowner, No. Dak.
May 16, 1937

State Game and Fish Dept.
Bismarck, No. Dak.

Dear Sir:
Well it is May now and the birds are here again. So look out for crows and other harmful insects.

You asked me to write and tell you about the geese and ducks. There are hundreds of geese and ducks flying north and south. Comparing with those for the last four or five years. They come and land rite around the yard and eat by old straw stacks sometimes. Some of the crows are dying from gopher poison. That's about all I know for this time.

Your Junior Game Warden,
Anton T. Dikhiemer

Now I really read those letters to show you that these young people are interested. I could take up the rest of the morning and all the afternoon reading you similar letters. These are not picked letters to fit this occasion but I just picked up a few of them as samples. I made no effort to prepare a paper because it wasn't necessary.

We have the birds, we have the ducks, and for the good of the sportsmen in North Dakota I hope that all of us will make some kind of a recommendation to the Biological Survey so that they will put the right kind of a bug in President Roosevelt's ear so that when he issues his proclamation it will give the North Dakota hunters at least a few days shooting.

I would like to see a closed season. I would like to see it closed all through. I know it wouldn't meet with general approval, but it would be a miracle worker for conservation. I am going to get myself still further into trouble by saying that we will never get a closed season so long as dollar duck stamps are for sale. I wouldn't be surprised that in the future we never get a closed season, and we couldn 't get it even if we wanted it. There are too many dollars coming in from duck stamps. But let us get a season which will give those who support us a little shooting.

Personally I would rather go out and shoot skeet than ducks. I have done my share of duck hunting in the United States and Western Canada, but I would rather shoot skeet; no chance of lumbago, cold and all that stuff. But there are a lot lf fellows who are waiting for the time to come back when they can have just one more good duck shoot and they haven't had it because the seasons were not set right.

Last year, two days after the duck season opened, everything was frozen up and the ducks were gone. We are mighty proud to be known as the duck breeding State of the Union but we are a long way from being the best duck shooting State. We raise the ducks and then send them South for other fellows to shoot. But I hope proclamation will give at least 4 or 5 days of good shooting in North Dakota, Minnesota and possibly South Dakota. Let us not have a season so that when the North half of the State is frozen solid, the south half is open.

With that I believe I have covered my subject. If you have any question I will gladly try to answer them, if not, thank you.

Mr. Johnson: The next speaker is M. M. Sullivan but Mr. O'Connell advises me he is an after dinner speaker so we will wait for him until after lunch, and we will move ahead to the eleven o'clock discussion and hear from Mr. Grimmer of Wisconsin on live decoys and batting.

Mr. Grimmer: I realize gentlemen that this subject is very controversial so I have drawn up a few notes to guide me. This is in no way an attempt to give a learned discussion on the use of live decoys. It is merely a discussion of the things we have found true in my State of Wisconsin, and I think that what is true in Wisconsin may readily be applied to other States as well.
I think that all of us will agree that the use of decoys has played an important part in the annual kill of water fowl generally throughout the country.

We realize of course that conditions vary according to States. In Wisconsin we Have some very fine duck water. The prohibition of the hunter in not permitting him to shoot over decoys has led to an increase in jump shooting, shooting from skiffs and in pot holes, but we used a lot of decoys in Wisconsin and recently we completed some figures on our annual kill and I believe you will be interested in these figures as they reflect the facts over the period of the past six years.

For the past two years we have had regulations prohibiting the use of live decoys in hunting ducks and geese. The object of the Biological Survey in making this regulation was to save the water fowl, but I want to ask you, do you think we have saved a lot of water fowl? We have come to ask the question in Wisconsin, what purpose are we serving by abolishing the use of live decoys.
We have four homely classifications for our ducks in Wisconsin. First is the "Coot", the mud hen, the poor man's duck. We have good shooting on this variety. I would estimate the annual kill to vary from 200,000 in poor years to 375,000 in good years. The next is the mallard duck, the most popular and likewise the most plentiful. There is no danger of it becoming extinct. Then we have the other marsh duck species; the black duck, pintail, spoonbill, gabbler, and these constitute a very small part of the Wisconsin kill. Fourth and most important is the diving duck species; the canvas back, red head, scoffs, golden-eyes, buffing head and ruddy.

I don't believe the Federal Government is interested in the saving of the diving duck species. They have a closed season on four of them and roughly this is about the situation in Wisconsin and the effect of the live decoy regulation in relation to them.

Leaving out the bad years of 1934-35 and going back to 1932 and 1933 the figures we have are interesting. Wisconsin ranks 5th or 6th in the sale of Federal Duck Stamps which gives you some idea of the number of hunters. At any rate in 1932-33 the kill in Wisconsin was 115,000 canvas back, 45,000 red-head, 300,000 scoffs and in the same period some 300,000 mallard, 200,000 miscellaneous marsh duck species and 200,000 coots.

Now in 1936 we had some excellent shooting. The commissioner from North Dakota asked where the snow geese went, well, I can tell him where some of them went. A very large part of them went through Wisconsin. We had the finest season on geese we have had in years and that in face of the fact that only about 1 % of the geese go over Wisconsin. The census report shows that upwards of 2000 snow geese were taken in Wisconsin last year and this is unusual.

In 1936 our mallard kill was 200,000, our scoff kill 190,000 and the marsh duck kill was 130,000, and this after 2 years of prohibition of the use of live decoys. The point I am trying to draw home is this. The mallard kill is about the same, our marsh duck kill is about the same, but the diving duck kill is on the increase, and unfortunately the kill on some of the rarer marsh duck is increasing such as the green and blue wing teal.

Every canvas back or blue bill hunter knows that the placing of a hen mallard means a good decoy, and they don't use them now, because of the regulation but they are using big flocksof block decoys and every canvas back hunter knows what this will do. He knows canvas backs decoy easily.

Every marsh duck hunter knows that with three or four live decoys and he can go out and get better marsh duck shooting than with 50 blocks, and I believe that the result of this live duck decoy regulation is that the hunters are going in for bigger and better blocks and losing out entirely on live decoys and it has resulted in a concentration of diving ducks and has saved the mallard.

I think one of our objects shouls be the conservation of the canvas back.
This may be a far fetched suggestion. Suppose the decoy regulations are revised and what I am saying applies particularly to Wisconsin. Suppose the regulations were so revised as to make the hunter abolish his block decoys or cut the blocks down to 10 or 15 to get away from large block set ups and the use of blinds in hunting diving ducks. Permit the use of a few live decoys.
I believe such a regulation would save a great number of birds this coming year in Wisconsin, and would save a greater number in two years. It might be acceptable in this critical situation. I agree most heartily with the Commissioner of North Dakota in his statement that he doesn't believe we have a chance to get a closed season on water fowl.

Another point about Wisconsin is this. Years ago when they could use live decoys thousands of sportsment used mallard decoys but didn't shoot any more than now, but they raised more and stocked them. We had a thousand or more places artificially raising mallards. Some were banded, some not banded, some used as decoys migrated, but there is no more of that today.

The other day I tried to get 20 good mallard ducks for a

commercial breeder. We have 119 commercial duck farms in Wisconsin. It took me two weeks to find 16 hens and four drakes when a couple of years ago I could have got 200 on the first telephone call.

Now as to the question of live geese decoys. It is beyong our jurisdiction. Wisconsin used to be famous for its goose hunting but this is not the case now, the season closes too early for us to get any good shooting. The kill last year was a small fraction of one percent of the total kill. We have suggested we block theNorthern counties for goose shooting. I don't think the use of live decoys in Wisconsin would mean the taking of more than a thousand or fifteen hundred additional geese. We have had some complaint from goose hunters because of the season and it is chiefly from hunters in the Southern section. They say that late in November when shooting is going on just over the line, the geese come back across the line to Wisconsin to feed and then fly back to be shot.

I think that insofar as geese are concerned the difference between use of live decoys and block decoys is so small as to make but little difference.

On the question of artificial baiting, Wisconsin votes "No." without any question to this general practice. We feel that artificial baiting is comparable to the salting of deer. We don't believe it is sportsmanlike and it should not be permitted at this time. Although we oppose artificial baiting, we do encourage the private and public construction and maintenance of nesting and feeding and shooting grounds. These will not only give the hunter better sport but will develop our sporting waters and be of general good. I am of the opinion that those individuals and clubs who have made a practice of baiting can afford the time and the money to assist the general public and thus help not only themselves but others in this general waterfowl restoration program.

I wish to have this body give some consideration to this matter of live decoys. The figures I have given you for Wisconsin are based on reports from 65 to 80 percent of the actual number of licenses issued. This past year we received 178,000 actual returns and we base our report of the annual waterfowl kill on this figure which we believe to be accurate. Wisconsin is not purely a duck breeding State. Se shoot some of them, but we claim the other fellow gets most of them. We raise mallards and blue wing teal chiefly, and there are a lot of them this year. We have the finest diving duck waters to be found anywhere and we believe these waters should be protected for some time in order to preserve these birds for the future.

All of our efforts after all are directed toward the conservation of the waterfowl and other game. The duck will come back when we have sufficient feed and sufficient water for them.

Mr. Johnson:- What percentage of waterfowl hunters had live decoys at time regulations went into effect?

Mr. Grimmer: I have no way of knowing that but if a man made

a practice of mallard shooting he usually had some live decoys, at least a small flock of them. They used all the way from one hen to a flock of twelve or more.

Mr. Johnson: Do the commercial plants have live ducks they would rent?

Mr. Grimmer: In earlier days the individual sportsman, farmer and sportsmen's club would raise from 6 to 50 ducks and they would use just a few of them. They did not rent them.

Mr. Johnson: I recently saw a bulletin in which the use of live decoys was advocated. Now if the regulations were changed to permit use of live decoys and abolish blocks no one would have decoys in 1937. Our commercial plants have quit raising decoys. The regulation would be effective only 60 or 90 days before the season opened and no one would have decoys. If live decoys would be legalized it might save some ducks this year.

Mr. Grimmer: Well, there are plenty of old farm ducks left in Wisconsin, but the rear end is right down in the ground, but they could be used. I have used them all right. Mallards and the other marsh ducks are the ones that would come in and the diving ducks would benefit by the use of the live decoys.

Mr. Johnson: We now come to a most controversial topic and that is the matter of Zoning. I think there is no other subject which places so much heat on the game commission as this. It is out of the question to divide one state into two zones. If we did, it would extend the season for fore than 30 days, possibly 45 days and in these days of rapid transportation such zoning would be out of the question.

But there is the matter of dividing the United States into zones and making and imaginary line of dividion. It is a difficult problem, it makes for difficulty in enforcement and I hope it will provoke a lot of discussion. It is a hot issue, possibly more so than any other problem connected with migratory water fowl. It will be discussed by Mr. Lynch.

Mr. Lynch: I really am going to side step that issue. I have only been assistant director for 4 or 5 months and while I could tell you what I think about it I am goung to side step it.

I bring you greetings form the Director of my State, Illinois, Dad Thompson, a man you all know and a man whom we all love in my state. I say, Mr. Chairman, I am going to side step that question because after all a man who has come up from the field and been in the administrative work only 4 or 5 months is not as qualified to talk about it as some of the others who are here.

I would like, however, to talk to you about some other things. I could tell you about our game management project or the Field work in our State, and possibly I could talk to you about the duties of an inspector. I was inspector in the Chicago district for several years where all the pheasants, ducks and

fish clear through and some of the difficulties we have with that work; or, I might talk to you about the Federal men and their work and what they have done for Conservation, and who, during the four years of my work in Chicago were working with me very closely and were my friends and they are my friends today.

Down in Illinois and coming in from the field as I have, I am familiar with the game program we have, and I will say that we do have a good game Conservation program.

I am sorry our director could not be here today but we have some legislation pending in Illinois before the legislature and he felt he should stay there. We are passing one of the finest codes, most positive codes in the land. It has plenty of teeth in it and it doesn't conflict one section with another. It tells you exactly what you can do. It is one of the best codes in the United States. Tells you when you can and when you can't. What kind of fish you can take, what kind of game you can shoot, and if it is not mentioned in the code you can't take it.

Getting back to game management, we have 102 counties in Illinois, Out of the 102 counties in Illinois we have 52 units in which sportsmen clubs are located. Each year to each of these sportsmen clubs we give 450 chicks or 235 quail depending on what part of the State they are located in. These sportsment clubs are to raise the chicks and turn them loose in the early fall, and when they have done this we give them 450more chicks or 225 quail, which is their allowance for the next year. We do this in addition to the usual distribution of game which we carry on and under which program we distribute 40 or 50 thousand more birds. I believe that in the next 5 years Illinois will rank very high among the States of the Union in game conservation.

Now there is no politics in my state, you know that. But I want to tell you that we have a Governor who is a sportsman and in that department, there is no politics. Every man has to earn what he gets, come up from the ranks. I started as a game warden, went from that to Inspector and finally to Assistant Director. It took me several years but I worked for everything I got. I know that politics in Illinois does not touch on the Game Commission. I know that all the time I was Inspector in the Chicago district, I was under instruction from Mr. Thompson, that the game laws were to be enforced and politics played no part in the enforcement. I have had to deal with a lot of touchy problems there but it was a case of short square and straight from the shoulder. Take them all as they come and I say to you that what this country needs most, and I believe every director will agree with me, is to take the matter of ~~every director~~ conservation out of politics and put your men under Civil Service and set up a method of selection. Make them pass a physical test and then qualify through an examination what they know about the raising and protection of game in their state and in neighboring States, and in that way I feel we can get somewhere in connection with this work, be

it Federal, State or Local.

Getting back to this program which we have and how we operate we have an inspector and it is his job to go to these organizations who have the game ponds and the natural cover for birds. He inspects the place, sets up rules and regulations for the erection of feeding pens, brooder houses and runways, and he must be certain the clubs are in a position to raise the game before we turn it over to them.

We have a man who goes out and checks as to whether this is a club, a game farmer or what not. He checks their qualifications and reports back to the department at Springfield. If his report is favorable and they meet with the department requirements, we know it is a good place to leave birds. If not, we simply write them a letter and tell them that our inspection proves they do not have the right kind of a place to raise birds. The State of Illinois has gone along with the farmer. In other words we distribute seed and ask him to set up an acreage and raise a patch of grass for these birds and all through the State you will find these patches which serve as feeding and cover spots for the birds. The sportsmen clubs pay us about $5.33 per 100 lbs. for this seed and then they go out and plant the acreage so that in fall and winter the birds have some place to go to eat.

In Illinois an inspector may have one, two or three counties, he works in close cooperation with the sportsmen clubs. Our inspectors send in information as to how they operate and what conditions are in the district. How many ducks at the last census, how may pheasants; how many fish were caught in the territory, what kind of fish, where they went and who was fishing.

Illinois is coming to the front. We are putting out our birds and tracing them, we know where they go and go takes them.

I could say a lot about zoning. We hear a lot about it. Some want the Northern part of the State in one Zone, others want the Southern part in still another zone. I know what sportsmen want all over the United States, but I told you when I first stood up here that I represented the Director and I wouldn't want to speak for him on this subject. Tomorrow I am going to read a paper which he prepared and asked me to read. I know you will find it interesting.

But coming as I do from the field and having laid down the uniform in the past 4 or 5 months, I believe I better side step zoning. I believe I come from the greatest State in the Union, governed by the finest Governor and that I work for the finest Director in the United States.

Mr. Schwab: Does your game program provide for the improvement of environment? You mention these sportsmen clubs and that an inspection is made of pens, brooder houses etc. and if they are not suitable, the birds are not sent. Now if they are not satisfactory, do you have any program to improve the environment

and make these localities more suitable?

Mr. Lynch: Our department is divided into different divisions. We have our fish hatcheries, forestry department, game birds etc. Answering your question, suppose that in some part of the State there was a request for this bird.supply and our inspection proved the place was not satisfactory because of cover or feeding, it would be referred to our Forestry Division and the State Forester would take a hand. Illinois is appropriating, $230,000 to bring back its code and reestablish game in Illinois.

I just want to say that we have a Governor who is a sportsman and he supports the department 100%, and any appropriations that are laid aside for raising of game are absolutely okay.

It is unfortunate that Mr. Thompson is not here to tell you about it but we have legislation that has passed the House and is now in the Senate and he felt he should be there.

Mr. Walters: Do you have any figures showing the annual kill of pheasants?

Mr. Lynch : No, we have never made a chedk on that but we will this coming year.

Mr. Johnson: What has been your experience in the past three yrs with this Biological Survey Zoning? How is it working out?

Mr. Lynch: We have had some complaints. Illinois gets into the zone with Wisconsin and Minnesota, but it is a touchy problem. How would you like to have the Biological Survey pass the buck to you?

Mr. Foley: What kind of dates would you name if you could?

Mr. Lynch: We opened on November 1st, Wisconsin on October 10th and closed on November 8th.

Mr. Johnson: Or that privilege was given the States, what change would you recommend in Illinois?

Mr. Lynch: We have a long State, the conditions differ in the Northern and Southern parts of the State.

Mr. Johnson: Would you cut the State in two and have two Seasons?

Mr. Lynch: (He) It could be done, might be most satisfactory.

Mr. Walters: Would you be in favor of shooting only Saturday, Sunday and Monday?

Mr. Lynch: No, but as I said, I am not qualified to speak on zoning.

Mr. Johnson: I think the Biological Survey are the logical people to handle this because the heat is really on so far as the season business is concerned.

North Dakota and South Dakota have been more fortunate than many States on this question. For instance, in North Dakota they might move the season back a little and start it on September 25 and we in South Dakota might move back 15 days. Our States are no more northern or southern than Minnesota or Wisconsin.

If a state were compelled to bisect itself and establish its season to cover a 30 day period it might work a hardship. If we are going to open the season late enough to get the northern flight, then our norther hunters get not shooting because the earlier birds are gone and everything is frozen up when the northern birds come down.

If it is earlier, then the season is over before the northern birds come down. I don't know but what it is a good idea to let the Federal Government take the heat for us.

Now that is just a suggestion but if we are going to make a recommendation to the Federal Authorities expressing our honest convictions and expect them to act upon it we should give them something to act on. I think it is a hot question. I got my tail in a crack three or four years ago when they asked O'Connell if he wanted his dates changed. That was the time that Secretary Hyde was being asked to change dates in Missouri and he had to change them. There was no heat on from South Dakota for a change, but he made us look like monkeys out here.
Mr. McFarland:
On the zoning question, North Dakota and South Dakota are not bracketed alike we will say. They have an open season in North Dakota starting the 25th of September and South Dakota opens say from the 1st to the 10th of October, then Minnesota will have to be zoned in two separate brackets and there could be 15 days difference betwen the northern and southern part of Minnesota and as a matter of fact you would actually have a 45 day season.

It seems to me there is a lot more to this zoning proposition. If all the States in the United States were considered on the basis I have just mentioned in relation to North and South Dakota it would in effect lengthen the season 15 days.

Mr. Willard: You mean if North Dakota were in one zone and South Dakota in another, then Minnesota would have to be zoned in two brackets.

Mr. Foley: But, Mr. Willard, the State is not zoned by legislative act. The hunters could go from one part of the State to another.

Mr. Blizzard: We have a situation in Iowa which is causing us some trouble. We have always considered the zoning problem one that belongs to the Biological Survey, but it has caused us

some trouble. The zone comes across the southern boundary of Wisconsin to Eastern Iowa, then jumps ninety miles north on the Mississippi and across to the southern boundary of Minnesota and South Dakota.

The opening in Northern Iowa is 20 days later than in Wisconsin. It is true that if you run the zone through at it should be run northern and southern Iowa would be open at different times, but that doesn't stop the fellow in northern Iowa who says "but they are shooting in Wisconsin, why can't we shoot in Iowa? " It is a touchy problem, but last year there was little shooting in northern Iowa because of the freeze and it put the heat on. The zone comes west to the Mississippi jumps north 90 miles and this blocks out on northern Iowa shooting.

Mr. Grimmer: Why do they object?

Mr. Blizzard: Because the northern Iowa lakes are frozen over when our season opens, while you have 20 days of shooting.

Mr. O'Connell: Most of our hunting is in what we call the North Platte Valley or the northern half of the State. Last year we should have been in the same zone as South Dakota. We have about the same duration and the same ducks, we didn't want to be classified with Kansas. It is too far south, we belong to this group of States represented here.
We found the same trouble in Nebraska that Mr. Blizzard mentioned in Iowa.

Mr. Sullivan: The subject of this paper offers much for argument and covers a wide and variable field of conclusion when considered by the individual. It is not my purpose to give you any fixed rules regarding the full protection of certain species of birds, but rather to bring to your mind the fact that there are such regulations present and the good and bad effects in them as seen by sportsmen.

We all have met up with the man who says it is a mistake to try to protect, by prohibitory laws, certain birds that are found with birds not protected, and which not one shooter in fifty can identify. Others say that a shooter should be able to distinguish between them or take the consequences. There is an imposition on either the bird or the shooter, no matter which way you take it and so some are for and some against such protection ~~the wood~~ of the wild duck. Another school of hunters think that regulation of hunting or a closed season on certain species is not the proper approach to the solution, for with years of protection the wood duck has not appreciably increased in numbers. It would seem that, as with many of our wild fowl, the natural conditions for propagation and not the gun of the hunter was responsible for these and similar species, and the imposition of protection was more of a hardship on the shooter than benefit to the bird. We have all seen, in the past few years, since the canvas back and thered head were given complete shooting immunity, many other of their diving brethern occupying the same breeding and feeding grounds, where they enjoy the

protection of their more favoured feathered friends, but are shot at when separated from them and yet are in no more danger of annihilation than the fully protected ones. One might think that the Merganzer of which one is killed to fifty other birds and which enjoys no special regulation should in time become our commonest duck, but such is not the case. The most killed and hunted of our inland ducksis the well known mallard and he continues to thrive and propogate and is killed in greater numbers than many of his disappearing brethren for the simple reason that he adapts himself to changing conditions. If the breeding territory of any bird is interfered with his existence is doomed and all the shooting immunity of man made laws will not draw out his existence an added score of years. Many think that the red head and the canvasback are doomed in spite of all our protection for the reason that their natural breeding grounds throughout norther Nebraska, western Minnesota and North into the Canadian provinces of Saskathawan, Manitoba and Alberta have gradually been destroyed by agriculture and drainage and suddenly wiped out almost entirely by drought and it remains to be seen whether a fully closed season is going to prove whether they are doomed or not. Some think they are; others think different. The crucial test is now being tried. We hope with success. If government restoration of natural breeding grounds is a success, if immunity from shooting helps, if full protection and government aid avails, all well and goo - we are for it. If not, then nature holds her sway and the delectable canvasback and its companianate red head must go the way of the prairie chicken, the prairie grouse, the Nebraska quail, the bison and the antelope. Anyhow -- Come what may - these two species of duck, whether returning in millions as of old, or passing on, like the dodo, will have had the attention of a conserving government more than any passing game have ever had. Of course many sportsmen will have the compaint that full protection, which includes identification of your bird, selection in your shots and other handicaps make it so hard on the hunter that it is no longer a pleasure to hunt, but these many sacrifices are what will make conservation precious and worth while.

We confess we have seen full protection a failure so far as bringing back a species of game like the prairie chicken, grouse, and quail, which became doomed though no evil of the hunter but because of natural causes, but, we have seen the protected, man imported pheasant, thrive and produce profusely in their wake, and we may see in man regulated marshes and lands a new home and a new life for wild fowl. In a civilization that appreciates them. At least it is worth the effort.

It seems to be the consensus of opinion that a full protection especially with a determined effort to improve breeding grounds, is going to be the salvation of certain species of our duck family viz; the canvasback and the redhead. The sportsmen should welcome this regulation for if successful it will mark a new era in a campaign to give to the future some of the duck hunting pleasures of the present and the past.

As an individual I cannot reconcile myself at the present to a

closed season for the preservation of all wild life but as a friend of conservation and a government willing to expend its good will and money to giving full protection to certain species of wild life, I think the sportsmen should cooperate so that we may learn the best possible solution of our wild life situation. If successful it will be the dawning of a new future where we may hope to enjoy the pleasures of the present day shooting for a long time, if a failure it will be an additional lesson that nature sets a plan hard to imitate.

Regulations according full protection to some of our species of wild life shows us the way to conserve all of them.

Mr. Johnson: Well it is a situation that not very much can be done about. It is something we will have to bear up under and hope that the next two or three years the good old fashioned condition can be reestablished and we can open on the 16th of September when it should open and run for 60 or 90 days and in the meantime we can try to rehabititate our ducks.

We are trespassing on the time and must get on. I see Dr. Sullivan is here and we will hear his paper on "Regulations According Certain Species Full Protection."

Dr. M. M. Sullivan:
(Paper by Dr. Sullivan)
The gist of the paper is more to show that when there is a closed season on birds those birds do not increase in number as might be expected, and the result of our Surveys might be a hint toward some other method of Conservation. I am of the opinion that a closed season on specially protected birds will not be of much help, but that any effort we make in educating the public, especially the hunter, as to these birds, then habits and etc. could be of far greater benefit in our conservation program.

You can go to any of our lakes and find them dotted with dead ducks of the prohibited variety. They have been shot through error and when the hunter found they were protected he let them lay.

Of course the hunters keep away from the waters known as diving duck waters where canvas back and red head are found, but they shoot them at other waters. It is my experience that very few hunters can tell the difference between ducksin flight.

They shoot them first and identify them later. It is my belief that some sort of educational program would be the best thing. Out of one hundred hunters, I doubt ver much if you could find a Half dozen or more who could identify the species even after they killed it and had it in their hand, let alone while it was flying over them, and I don't believe you can enforce this regulation because an honest mistake is an honest mistake. I doubt if you could find a jury and place the common variety of ducks before them and have the jury name them correctly.
Mr. Johnson: We will have an opportunity to hear law enforcement officers talk about this after lunch. We will adjourn now until 1:30 P. M.

FRIDAY AFTERNOON SESSION

Mr. Johnson: Is there enyone her who has not signed one of these cards? If so, I wish you would fill it in now. I am going to take about ten or fifteen minutes of our times this afternoon and do a little introducing. As I call your name I would like to have you rise and let us all see you.
(Mr. Johnson made the introductions)

I don't know how many of you fellows are familiar with the conservation set-up in Wisconsin. Many of us fell that we have a lot of things in our states to be proud of, and then when we have something new to consider, we look to Wisconsin and see what they have done.

I am particularly happy and proud to introduce the next man, Mr. William Mantke, who was not only one of the pioneers on the commission, but was a member of the pioneer group which met about ten years ago and decided to do something about game conservation, and he has been instrumental in bringing about the splendid set-up that the state of Wisconsin now has. He gave of his time long before he was identified with the Commission and he probably has as extensive business interests in Wisconsin as any one. But he comes clear out here to South Dakota to lend his moral support to our program and I am especially proud now to have him rise and let you all see him.

We are not like most other conventions, in that we do not have identification badges, but there is something about a conservation officer that identifies him and makes him stand out from the crowd whether it be in the lobby or in the highways and byways. When you see one, just walk up to him and shake hands. He might have something helpful for you just as you might have something helpful for him when you begin to compare notes.

Mr. Lynch: I would like to ask a question. Who provides the uniforms that are worn by the South Dakota wardens.
Mr. Johnson: The departmentfurnishes them.

Now, we will go on with the discussions relative to the regulations pertaining to waterfowl regulation. We will hear a paper by Mr. Charles McFarlane, Assistant Commissioner of the State of Minnesota, on Daily Opening and Closing Hours.

Mr. MacFarlane: It is the privilege of authorship to take every side of an argument, to view it as it is discerned by many men, and the subject assigned 'Daily Opening and Closing Hours' is one which is not fraught with potent controversy but the presentation of this paper should, no doubt, evoke a discussion of the subject on the floor; for this reason, and in anticipation of the discussion the time for which is limited, the paper is as brief as it is possible to make it without discarding certain salient facts.

In the discussion of 'Daily Opening and Closing Hours' for the taking of migratory waterfowl, we may postulate, that all the limitations and restrictions imposed by the Federal Government during the last two or three seasons, were made in the hope that the total annual kill would be measurably decreased, and a reliance upon these limitations for effecting a lessened kill, would still provide some hunting possibilities.

The shooting hour regulation, 8 o'clock to 4 o'clock each day, while a minor limitation, among others considered more drastic, no doubt saved large numbers of ducks and simplified the enforcement of all the restrictions and limitations.

American waterfowl conservation has been comprised of hunting controls conditioned upon restrictions on when or what, and how one might hunt. Many of these restrictions were diligently and violently opposed both by sportsmen's organizations and commercial interests alike, but it is significant, that in the last three years, the limitations and restrictions placed upon waterfowl hunting by Federal regulations, have not met with the customary and expected degree of opposition, and there has been manifested a satisfaction, that the regulations have not unduly limited the hunting possibilities but rather accepted as reasonably considering the present status of waterfowl.

Certain it is, that the duck hunters of Minnesota have realized the plight of the waterfowl, for they have had ample opportunity to witness the diminution of the waterfowl population, and while a large number of sportsmen are still willing to forego the pleasure of hunting for another year, if it is deemed necessary, they are satisfied to accept regulations which will permit some hunting, while effecting a decrease in the total annual kill at the same time. It was not surprising when, the 1936 Federal regulation was published, that many sportsmen voiced the sentiment that the regulations were more liberal than was actually anticipated, and there is at present, every indication, that Minnesota hunters expect that the 1937 measures will not be liberalized. The seven o'clock opening hour has been accepted with good grace generally, and there have been but few instances where hunters have commenced shooting much earlier. There will always be some hunters whose trigger fingers will not be guided by the hands of a watch, and when one man possessed of such a trigger finger, shoots before the time, it is a signal for all other hunters in the vicinity to begin shooting but as a general rule, the half hour before sunrise shooter is not evident in the blind or the marsh, and violation of the early shooting are neither widespread or numerous.

It is not the easiest thing in the world to refrain from shooting at five minutes of seven in the morning when ducks are flying, and these few minutes do not make much difference; it is the hunter who itches to start blazing while it is still almost dark that does the damage, and it is decidedly irksome to the decent sportsmen to wait while other shots can be heard in the vicinity.

On the opening days of the waterfowl season in Minnesota, the

duck hunter loses one hour of early morning shooting by waiting until 7 o'clock, and this lost time is considered the best time of the whole day. It is certainly the time when hunters are afforded the best hunting opportunities, but with the regulations also prohibiting the taking of certain species, this early morning shooting does not permit the hunter, experienced as he may be, to know without any doubt, just what species of ducks he is shooting at, and the prohibition of delaying the early morning shoot until 7 o'clock has simply meant that large numbers of ducks have been saved, many of which are the protected species, and the reliance upon this 7 o'clock opening hour while effecting a lessened kill still provides some hunting possibilities, even if the hunting opportunities to many seem inadequate. The early morning shoot, however, is over in a very short time, and for the rest of the day until late afternoon shots are few and far between, unless weather conditions are suggestive of a good duck day.

Hunters, many of whom travel long distances for a day's shooting, and with a realization that bag limits are not to be readily obtained in the early morning shoot, anticipate that the evening shooting will bag some birds, and just at the time when birds are beginning to come in, it is four o'clock. The four o'clock closing hour on the opening day in Minnesota has meant one hour and 37 minutes of lost shooting time hitherto allowed by state regulation, and again this lost time has been the means of saving large numbers of ducks by cutting down the kill. For many ardent duck hunters the temptation to shoot past four o'clock is too great -- They are caught-- but to the warden who realizes how great the temptation is to these hunters, the subsequent arrest seems petty if not unfair, and convictions under these circumstances are not always easy to get. If the shooting hours were regulated to close at two, or even three o'clock in the afternoon, many hunters would not be tempted to delay their departure, and the regulations themselves would be easier to enforce, but the four o'clock closing hour is just the time when the hunter realizes he will get some shooting and when the shooting is just about to become good, he must stop.
How many of us, just when the trout are beginning to bite, and knowing that we should leave the fishing grounds for that dinner engagement, have the courage to leave on time. It takes will power, and to the ardent duck hunter who has sat in the blind all day long with little or no shooting after the early morning shoot, it takes more than will power to leave. He feels it to be an unwarranted disciplinary measure; he must impose upon himself to comply with the four o'clock regulation. The desire to shoot some ducks at a time in the afternoon when shooting is just getting good, is palpably more expedient at the moment to the hunter, than is the suppression of such a desire, and that, regardless of the consequences.

The seven to four shooting hour meant a total loss of 8½ hours in the morning and 29 hours in the evening, or in all 37 hours of shooting time lost during the 30 day season last fall. This constitutes a four day deduction form the 30 days allowed by

federal regulation. The annual kill and while it has not provided maximum bags for many hunters, it has at least provided some hunting possibilities.

Were the 30 day shooting season to be curtailed by the four days of shooting time actually lost during the season, and the shooting hours liberalized to permit shooting one hour before sun-rise to sun-set each day, the daily bag obtained by the hunters would be measurably increased, and such a provision would defeat the sole purpose of the regulation of opening and closing hours.

The shooting hour regulation, generally speaking, is one which has found favor in the eyes of those duck hunters who thought that the 1935 season should be closed, and was accepted gracefully by those who favored an open season, and both groups naturally do not now expect any liberalization of this measure. Even to the contentious hunter, little fault can be found with the 7 to 4 shooting regulation and regulations which have the general support of public opinion should be kept intact, at least until waterfowl populations are increased to a degree when such restrictions are no longer necessary. In the absence of accurate censuses and a better general knowledge of present conditions, it is difficult for any one to conjecture what the 1937 regulations should be, but to the Emergency Conservation Committee of New York, in their recent publication No. 64, entitled "The Waterfowl and Common Sense" the 1937 season must be closed if certain species are not to be exterminated.

The waterfowl picture this spring certainly looks more hopeful and more encouraging than it has since the beginning of the drouth period, and the gains which were made by the Federal Government in the inauguration of certain limitations were sure to have effected a decrease in the total annual kill. While the Minnesota 1936 duck kill figures are not yet available, field observations last fall indicate a reduced kill from the previous year of 504,433 ducks, therefore opening and closing hour for the taking of migratory waterfowl, is just, if not more important, than the number of shells that may be used in a gun, and if any alteration is to be made for the 1937 season, it is to be hoped that the hours will be further restricted to an earlier closing hour, rather than any extension of the present four o'clock closing.

Many hunters, who register their approval with respect to the present afternoon shooting of upland game birds, argue that a morning session on ducks, beginning 1/2 hour before sunrise to noon each day should be provided for. There can be little doubt that if a selective bag is announced for 1937, it will only mean the witless killing of protected and unprotected species alike during the early morning shooting period and will also mean an increased total kill for the season.

An increase in the waterfowl populations may be effected by a curtailment of hunting opportunities, and if further restrictions on bag limits are found necessary for the 1937 season, then the opening andclosing hours hould remain the same or be further restricted. Public opinion expects and demands that

duck populations be conserved and as far as the opening and closing hours are concerned, it is to be hoped that the number of shooting hours per day will not be increased, and the present opening and closing hours will not be liberalized.

Mr. Johnson: Does your law still provide for the 12 O'clock noon opening hour at the beginning of the season?
Mr. McFarlane: No, the legislature ammended that law so that now the season opens on opening day not before seven o'clock and during the rest of the season the shooting opens onehalf hour before sunrise and closes on half hour before sunset.
Mr. Johnson: I received advice on Wednesday asking that our recommendation to the Survey be such as to provide 12 o'clock opening day time/ The Minnesota lw states plainly that the opening hour of shooting on opening day must be 12 o'clock noon.

Then we have the discussion as to the closing hour. South Dakota had a little experience in regard to closing hours. We established it at 2 o'clock, in disregard of Federal regulations, and our experience supports Mr. McFarlane's paper. We found that a four o'clock closing hour gave just a little too much temptation to the hunter. The ducks were just beginning to fly and he had to leave.

It brought a lot of heat down on our commission. The sportsmen wanted to know why we were so inconsistant as to have regulations which were not consistant with those in neighboring states, so I am hopeful that this years regulations will recognize this problem and establish uniform opening and closing hours, especially in regions where good shooting occurs on boundary waters.

Mr. Lynch: I should like to ask a question. Would the authorities of Minnesota, and Wisconsin yield to authorities of Illinois if the occasion arose?
Mr. Johnson: You mean that if a violation occurs in Wisconsin and the violator went over into Illinois to evade Wisconsin authorities, or vice versa, whether the two States would recognize authority of the wardens?
Mr. Lynch: Yes.

Mr. Johnson: I don't see just why that would be necessary. You get it through a Federal Game Wardens house and I believe such State Game Wardens, especially in states that have borderline hunting see to it that their game wardens have Deputy Federal Game warden licenses. I know we do in South Dakota; however, it is also true that their authority as such can only be used in the enforcement of Federal regulations.

Now we want to move along with the program. I am going to reverse the order a little so that we can have the discussion at the end of the papers. The next speaker will be the Regional Director of the Biological Survey. He is very much interested in our discussion and if you have some question relative to the Biological Survey, or perhaps there is some matter of legislation

which he wants to explain to us; so, I am happy to present Mr. George Tontkin, Regional Director, U. S. Bureau of Biological Survey, Moline, Illinois. Mr. Tontkin you have the floor.

Mr. Tontkin: You did not, I am sure, come here to listen to me offer an alibi, but I must start with one for not having prepared a paper. But the first I knew about being called upon to talk to you was the receipt of a telegram just a few days ago. I am not going into any extensive alibi, however, because I am glad to be here and while I had planned to come and listen to your discussions I had not planned on making a talk.

However, our Division of the Survey has been actively interested in the enforcement work. I have received wonderful cooperation from most of the states in the United States. In fact, it would be practically impossible for us to enforce the law if it was not for the cooperation of the States. Many of our men were formerly State men. They know your problems--know them thoroughly.

The Civil Service Commission conducts examinations and prepares lists of eligible men and it is from these lists that the men are picked. Most of them are men already in the employee of his State and so we try always to pick the best man you have. We can't go outside of the State to pick a man who is to work in the State so I ask you not to feel too hard toward us when we take you men. The best men we can get are the men who have had their training under you, and you will find them thoroughly cognizant of the problems you have. They have been drilled in the fundamentals of your laws and when we take them from you, which is a loss to your department, you do gain too by the knowledge that these men are going to put the benefit of the knowledge they have obtained from you to proper use within your State.

It is our wish that they cooperate with your men at all times, and I believe from the reports I have received, that they do cooperate with your men. I know your men often ask them to assist in makeup of cases, obtaining affidavits, assembling evidence and presenting cases. I wish I had known before I left the office of the talk I was to give so I might have brought along the records. I wish I could tell you of the number of cases our men have made, the number of cases tried in State courts and the amount of money derived from these cases in State Courts which have gone to your funds; and too, the number of cases backed up and put through to a successful conclusion because of the assistance of your men. Many of the cases our men have handled were tried in State Courts. Violation ef hearings of Federal regulations are held in State Courts and the money goes to the State. Some States have had no provision for the enforcement of the Federal Code. For a long time they have helped, generally, in the enforcement of the acts but have lost the revenue thus obtained. But it is a little different now.

I also know that some of your States didn't like the idea of conforming to Federal regulations and that you demanded that if the Federal Government expected you to help enforce the

Federal laws, at least a portion of the revenue resulting therefrom should revert to the State and this was largely solved by the various States passing acts which paralleled the Federal act; however, I believe all of this difficulty is, to a large extent solved now, so let us pass on to something else.
Now in our work through the region we have a little trouble in squaring ourselves when we take our men out of one region into another. We move our men to areas where we believe they would be able to do work which would benefit the greatest number. We have had complaints from people saying, 'You don't care very much for the protection of game in this region because you move out and leave us."

But look at it in another way. We believe our menshould follow the flight of the birds and be at the points of chief concentration and not scattered in a half dozen more or less isolated spots when the comparative numbers of game are small. That is why we have to move our men from your areas at times.

Last spring we had a concentration of geese in Western Iowa. We didn't have as many men there as we should have liked to have had; however, we sent our men to help the Iowa men endeavor to help protect this flight. There were other places where there were small flights from which we had drawn our men in order to concentrate the largest possible force. At these smaller places our men might have stopped the shooting of two or three, perhaps half a dozen ducks, but if we had done so and the state of Iowa had asked us to, on the same principal we would have suffered a loss of thousands of geese at the chief concentration point. At this one point the concentration must have been 100,000 to 250,000 and these areas must be taken care of.

I wish all of you could see what our men are doing in the field and realize what our problems are. We don't have enough men to enforce the law. When we think of the comparative numbers of men that other agencies have whose province is the enforcement of law our own force seems entirely inadequate, especially since there are so few criminally minded people, house robbers, car thieves, etc. in comparison to the total population, and there are thousands of sportsmen in the field and I don't mean to call these sportsmen criminals, but they are doing many things in violation of regulations which should be checked.

I have been extremely interested and anxious to learn just what the various States have in mind toward the regulation of the season.
How many of you take the census of game through your State and Field man and know just what the various regions of your State have in the way of game?

After all is said and done you can add up any of these facts that look toward the preservation of game, such as no baiting, no decoys; length of season, size of bag etc., and if you place enough protection around the shooting areas you have a pretty good defense for them.

Under this defense there are certain species which will multiply enormously. I could give you many examples. In our little lake west of here, not in South Dakota however, I have seen at least 3000 white swan, once nearly extinct, now protected and increasing. In another section of the country further south I have seen vast numbers, up to 100,000 in one flock and others estimate still more than I, of fantail pigeons, also nearly extinct at one time.

I don't know of anything that helps them increase except the closing of shooting and the rigid protection which is thrown around them.

There is the wood duck, they have increased enormously, and I am of the opinion that if we could control the bag of the indiscriminate hunter, we might have an open season, but if we did have an open season, everyone would try to get the limit and they wouldn't last long. Some of the wood ducks, some of the swan, some of the fantails, could be killed off; but, you know that when you start anything like this you have hunters who will mow them down until few are left.

Our men have a very warm feeling for your men in the field and toward your head office. I don't know how many pleasant times I have spent in the field with them. They like their work and they tell me, "The chief had had to caution me not to forget control work." It bespeaks your cooperation.

These men of yours are in love with their work, that is why they are successful. A man who is a success in business or in professional life, likes his work. Your field men and our field men like their work. They wouldn't work long hours a day, seven days a week, if they didn't like it. And they will tell you that there is more sport in catching some two legged butcher than in shooting down the biggest grizzley or kodiac in the country.

But they get a kick out of it and if they didn't they wouldn't do it. They are blood hounds on the trail and it is a good thing that they are. If some of them do seem to interpet the laws a little too literally and because they do, bring criticism on our work, I feel sure that you will always find them fair. However, enforcement of the law is their job and it is one of the things the sportsmen must expect. If you didn't have wardens to work like bloodhounds, you wouldn't have the game you have today.

We can say all we want to about the various means of defeating regulations or slackening up on some of them, but you have to get back to the fact that a dead bird doesn't lay any more eggs.
But it seems to me that we can't satisfy everybody, we have to strike a happy medium. If we listen to the sportsmen in this State we get an entirely different picture than from the sportsmen in another state. Some of them go into the field just as you and I go, it is a privilege, a pleasure, and all

we want is sufficient leeway to furnish us some sport, but here comes the other fellow who doesn't care about decoys or baiting but wants something more exciting and more liberal still in permitting him to get his ducks.

The best thing we can do is to tell the sportsmen that we have not got enough game to go around, certainly not in as great numbers as we formerly had. We might look ahead to the time when we could have a three and one half month season had a 25 bag limit as we had years ago but that was during a time when we did not have the equipment of today. There were poorer guns and poorer highways, I have heard it said and I believe it is true that automobiles and improved highways have done more to deplete our game supply than any other one thing. But if we could get back to the the time when ducks were as plentiful as years ago, we would not have to go back to using the old equipment, but it is a matter of education, teaching the sportsmen the true status of things.

We appreciate your invitation to us to attend this conference. We expect you to have questions here you will want to ask, we don't expect you to agree with us and we possibly won't agree with you in everything, but there are enough things about which we do agree that if we will concentrate on those points we will have enough to keep us busy and we can forget the things about which we don't agree. Thank you.

Mr. Johnson: We hope that when the time comes for the general discussion that you people and Mr. McCutchon, of the Forest Service, will feel free to enter into it. We want you to feel free to enter into it. We want you to feel that you are a part of the meeting and I am sure you will have some helpful suggestions to make to the Resolutions Committee of the Conference in their deliberations in deciding what recommendations to make to the Survey.

I want to introduce Mr. E. G. Adams, one of our State Wardens, who will further discuss the enforcement of regulations.

Mr. Adams: Mr. Chairman, Members of the Midwest Associations. This is my first appearance before such a gathering. I did have the pleasure of attending a meeting in Rapid City of the various game officials of these States. I believe that was in 1923 and it was there I met Mr. O'Connell, Mr. ~~Walters~~ Mauthe and others. I don't know whether anyone else who was at that meeting is here today, but it is men of that character who are responsible for the very successful association we have developed. I have given a lot of thought to the matter of state officers and the enforcement of Federal regulations but if you will please accept the statements I make in the light of the Field Warden, rather than attempt to place a valuation on these regulations, or the multiplicity of agencies, and if you will keep that in mind you get, I hope, the thought I am trying to convey.

It is very easy for anyone to be sold on the work and still not be in accord with many of the regulations and that is very true. of enforcement work. You can readily see why many enforcement

officers will have difficulty in doing all the things he should do under these regulations unless he is thoroughly sold on the regulations he is attempting to enforce.

Mr. Tontkin told of the thrill attending a serious investigation and prosecution of violators of the regulations, but the greater part of the thrill is lost if the Warden cannot carry the case through to conclusion. If after he has spent a great deal of time in developing his case he is forced to see the offender liberated or let off with a small fine he loses a lot of interest in the case. I will mention a few of the reasons why it is difficult for Field Wardens to enforce the regulations. It is as easy to stray off on some other subject as it is for a hunter to go over in a protected field. He is tempted to climb over the fence and I trust you will pardon me if I climb over a fence or two and touch upon some subject already covered. It isn't with any idea of taking credit from those who have covered these subjects but with the idea of presenting these from the the point of view of the man enforcein the regulations.

We had little difficulty with the spring flight of ducks and geese because of the weather. The flight came in and about the time they got here the weather turned cold and they turned around and went back south and of course the concentration points were protected by Survey men, and the boys with itchy trigger fingers had a lot of difficulty in doing any shooting. Then when the weather did warm up, and it warmed up rapidly the flight came back and didn't stay long with us. The season was advanced, we had a shortage of feed, so we had little difficulty with the migration this spring.

The drastic curtailment of privileges accorded water-fowl hunters during the past few years has made the topic of State enforcement of Federal Migratory Water-fowl Regulations one of major importance. Because of the pitifully inadequate number of employees of the United States Biological Survey the greater share of the responsibility for the enforcement of regulations intended to protect Migratory Water-fowl has fallen on the shoulders of the various State Game and Fish Departments.

If in the discussion of this topic criticism is made of the Federal Migratory Water- fowl regulations and policies it is hoped that our good friends of the Biological Survey will not take offense but will consider these remarks in the light of helpful and constructive criticism.

We fully realize the great increase in the number of Federal agencies having to do with the acquisition of refugees and restoration of nesting areas and the promulgation of regulations governing the taking of water-fowl, which has resulted, in many instances, in untrained and inexperienced men being entrusted with the responsibility of directing policies and laying doen restrictions and regulations. Many an earnest, conscientious employee of the Biological Survey, as well as the rank and file of the hunting fraternity, has smarted under the unworkable and unenforceable regulations of the past few years.

When drought brought disaster and economic depression to the mid-section of the North American continent it brought a sudden realization of the fact that wild life and water-fowl in particular was facing extermination and extinction. The shock of this sudden realization of the threatened loss of our water-fowl forestalled much criticism of the regulations put out in an effort to save at least seed stock of our migratory Water-fowl.

There has never been a time in the history of conservation when the general public as well as the sportsmen were so completely sold onaconservation idea as was the case when in 1934 the first Duck stamp heralded a "new deal" for our water-fowl. Press reports of the allocation of eight millions of dollars of Federal funds for the relief of the ducks and geese and the announcement of the way in which the money from the sale of Duck Stamps was to be spent, and the appointment of one of our best loved sportsmen to head the Biological Survey sounded like the answer to the duck hunters prayer.

It is true that duckshave been saved, and this spring, for the first time in several years, a gratifying increase in the number of ducks and geese flying northward has been reported. That, of course, can be called an achievement of one of the objectives. But during the same period of time the movement for the betterment of conditions for our web-footed game birds has lost a lot of its "ducks appeal". Through the untiring efforts of partisan politicians, mercenary commercial organizations, impractical sentimentalists and greedy and selfish public and private interests the beautiful dream has been rudely shattered. e have seen a disillusioned enthusiast forced to give us the leadership of the Biological Survey instead of being permitted to carry out the cherished plans of the lovers of the great outdoors. We have seen the sale of Duck Stamps drop from an auspicious start to lower and lower levels. But worst of all we have seen the attitude of the hunting public change from sympathetic interest to one of suspicion and disgust, largely because of the increasingly unpopular and impractical regulations laid down during each of the past two or three years. While this may sound like a rather harsh indictment of Federal regulations and policies, I hasten to add that I do not believe the situation is hopeless by any means.
Apparently the tide has turned and ducks are once more definitely on the increase. Climatic and weather conditions also give promise of a more favorable future, therefore, I believe that time should now be taken to pause and catch our breath, as it were, and give thought to more practical and sensible water-fowl hunting regulations for the coming season. Because of the early date of this meeting of the representativesof the Game and Fish Departments of those States comprising the northern half of the mid-continent water-fowl flyways and the prairie duck nesting grounds, suggestions made by this group should receive careful consideration in Washington before the adoption of the 1937 Federal water-fowl hunting regulations.

I will endeavor to start the discussion of a number of Federal

water-fowl regulations with the thought that whether or not you agree with our ideas, at least a start will have been made that may lead to the adoption of resolutions or recommendations along this line.

It seems to me that the discussion of State enforcement of Federal Migratory Water-fowl hunting regulations should be divided into two parts, first, a discussion of the various regulations from the standpoint of their enforcement by the States and second, a discussion of the cooperation of the various Federal enforcement agencies which will properly include the Biological Survey and the Federal Courts.

We find that there is a difference in the responsibility of enforceing Federal regulations in the various states because of the fact that in some States the Game and Fish Departments may adopt regulations of their own similar to Federal regulations if they choose. In some States enforcement of Federal regulations is mandatory and in still other States the Game Department is not permitted to set up regulations but must abide by the laws made by their Legislatures. In South Dakota the Game and Fish commission is authorized to fix the season for the taking of water-fowl each year and may also set up daily bag limits, etc. Most of our field wardens also carry appointments as Deputy United States Game Wardens. Since October of last year we have not had a Game Management Agent or any similar Federal law enforcement officer located in our state. Consequently the enforcement of Federal regulations is largely left to our force of field wardens. We find that the chief advantage of a Federal commission for our wardens is of a moral or psychological nature. Cases are seldom taken into Federal Court by our wardens because of the delay and because of the fact that if the case does ever reach Federal Court the defendant is seldom given a fine worthy of the name and his gun is always returned to him.

Passing up the regulations regarding length of open season, zoning, etc. as matters covered in other papers, we quite naturally come to opening and closing hours. We believe that shooting should not be permitted during the entire day and that the birds should be permitted to have either the morning or evening feeding time without molestation by the hunter. We believe that morning shooting is preferable from a good many standpoints. In the first place if the birds are not bothered in the late afternoon and evening they can stay out in the feeding ground as late as they choose and will be more apt ot return to their customary resting place. Birds coming in from the North tired and weary from a long flight will be permitted to settle down for rest and feed instead of being "boosted" on their way. You have all seen how readily ducks change their feeding habits and I am sure you will agree that fewer ducks will be killed by morning shooting than if shooting was permitted through the late afternoon and evening.

Patroling and enforcement is made much easier by restricting the shooting to the first half of the day because the hunter comes out of his blind in broad day light and is more easily

checked. Where afternoon shooting is permitted, if he has illegal birds he has only to wait until darkness conceals his movements and he can get away with comparative safty. Last year we did not permit duck shooting after two o'clock in the afternoon and this idea proved to be quite practical. Of course we could just as well have stopped the shooting at noon as two o'clock but it sounded a little more generous to the hunter.

We find that one of the most difficult things to enforce is the opening and closing of the day's shooting with sunrise and sunset. With such States as North Dakota, South Dakota and Nebraska having two different time belts, it is absolutely impossible to enforce such a regulation. You can readily imagine how far you would get trying to enforce a regulation which permits a hunter on one side of a small body of water to start shooting at six-fifteen (or what ever time the sun happens to rise) and makes shooters on the opposite side wait for another hour. In South Dakota we have both Central and Mountain time and the dividing line is a zigzag line across the State fixed to suit the convenience of Railroad Companies of residents of certain localities. We believe that better cooperation could be obtained from the sportsman if he was permitted to start burning up his shells as early in the morning as he wished instead of having to sit idly by until he thought he was safely past the sunrise hour when perhaps the birds have been stirred up by some daring soul who started shooting fifteen or thirty minutes earlier. Unless the warden is right on the heels of a shooter it is next to impossible for him to do anything with the shooter who continues his shooting much after sundown. Because of the fact that it is getting darker every minute, the chances of locating and apprehending such a violator are very slim. It is comparatively easy to get the hunter to stop shooting at noon, or one or two o'clock because the birds are seldom flying at that time of day and the temptation to stay just a little longer is much less. It is well nigh impossible to establish a definite hour and minute for sunrise and sunset and the chances for a hunter being sincere and honest in his belief that his time is correct are so great that any prosecution is decidedly unpopular.

Perhaps one of the regulations which has had most to do with the decrease in the sale of Duck Stamps is the one giving full protection to certain varieties of ducks. This regulation has been about the most unpopular one ever set up in the history of water-fowl hunting. I dare say that it would have been impossible to have picked a jury of twelve men in the customary manner last fall, the majority of which would have identified all of the fully protected varieties of ducks, if they were laid before them, let alone recognizing them in flight. Under those conditions how can you possibly expect to successfully prosecute a violation of this regulation and keep the good will of the public? The fear of unknowingly violating this regulation kept instead of saving certain varieties of ducks actually resulted in the wasting of countless numbers of these sam ducks when they were killed and left to lay on the water. As an example of the the widespread disapproval of this regulation I would like to read an article by Stanley Andrews appearing in the May 1937 issue of the California Conservationist, (read)

"During the last five years I have made a careful study of the migratory bird situation, especially as it affect Southern California. In this period I have visited all but four of the States in the Union and have discussed the migratory bird laws with hundreds of duck hunters, game wardens, as well as with such authorities as Dr. W. B. Bell, Harry B. Daws and Seth Gordon.
I have hunted ducks in Southern California for 45 years and during the last 30 years have been vitally interested in the conservation and protection of game, both migratory and resident.
My conclusion in regard to the present migratory bird regulations, from the angle of conservation, is that they fall far short of their desired goal.

If one were dealing with experienced hunters the regulations would be fairly practical. But the fact is that about 75 per cent of the duck hunters at least in Southern California cahnot distinguish between a Sprig and a Canvas back, even, when they have them in the bag.

Anad at least half of this percentage of hunters can't tell the difference between ducks and coots while they're in flight; and any poor loon that gets within gun range is sure to be shot at for a goose.

The average hunter wants something to shoot at and all the laws and regulations that can be devised, except closing the duck shooting entirely, will not stop him from shooting at every duck that comes within rifle range. Yes, I mean rifle range!

Since the Ruddy has been on the closed list I have personally seen hundreds of these birds killed and left lying on the water. On numerous occasions I have counted up to 50 Ruddies, killed within an hour's time.

Even the most experienced hunter finds it impossible to comply with the latest regulations during bad weather, or when the sun has partially blinded him.

Of course, he should let the duck go under these circumstances. But he doesn't, and no court in California would punish him for killing a duck accidentally.

This season I saw one hunter in this experienced group kill 16 ducks before he had his limit of legal birds.

Some duck hunters profess to be able to distinguish between a hen Greater Scaup and a hen Redhead while in flight. But I am quite sure that the average experienced duck hunter would kill the bird first and determine the species afterwards. During the last season I engaged in a discussion with two duck hunters--each of more than 20 years' experience--over the identification of a Lesser Scaup hen, they claiming it was a Ruddy. The bird was in our hands at the time.

My suggestions are to do away as far as possible with complicated regulations. This includes regulations that none but experts can be expected to understand and which game wardens find impossible to enforce.

Reduce the limit, if necessary, but allow any duck (Wood Duck excepted) to be included in the bag.

As an alternative, take the ban off Ruddies--at least in District 4; which will give the tyro something to shoot that will fill his bag and save thousands of more desirable ducks from being killed or wounded so badly that they are easy prey for predatory birds and animals.

I don't believe that I would be far wrong in estimating that at least 10 birds are lost in this manner to every 10 retrieved by the hunter.

It is all right to fully protect the wood duck as they are seldom seen and seldom mistaken for any other variety. But it is a mortal cinch that not may Redhead ducks, for example, will be killed if this variety happens to be scarce."

Another regulation which can never be fully enforced is the one limiting repeating and automatic shot guns to three loads. This regulation is an example of theoretical reasoning. No firearm ever broke any game laws unless at the bidding of its user. A man can be just as much of a game hog with a bow and arrow or a cheap single barrel shot gun as the owner of the finest automatic or repeating shot gun ever made. I verily believe that this regulation has encouraged "pot shooting" more than it has saved the ducks.

If you are going to permit every licensed hunter to take ten ducks, let us say, on each of a specified number of days, then why in the name of all that a sportsman holds dear, can't he be allowed to take those ten ducks in any humane or sportsman like manner he may choose, instead of hampering and bewildering him with a bunch of restrictions which can only be partially enforced and which attempt to say how he must kill those birds?

From personal observation covering a good many years of game law enforcement and from talking with other wardens as well as many sportsman, I have come to the conclusion that any regulation that can be successfully enforced must first of all be reasonable, second, it must be understandable, and third, it must be one which can be put into full force and effect at every jump in the road. To me it seems that the sanest method of regulation and one which is easiest to enforce is regulating the daily bag limit instead of trying to tell the hunter what style of underclothing he must wear or what kind of tobacco he must smoke. It seems to me that it would be just as reasonable to say that a man may not go huntin, in an automobile with more than four cylinders, as to say he may not use a gun capable of holding more than three shells. As a matter of fact the automobile has had more to do with the

destruction of our wildlife than any other single agency or implement in the last two hundred years.

Therefore, the question of State enforcement of Migratory Water-fowl hunting regulations resolves itself into the necessity for reasonable, enforceable regulations in the first place, and consistant cooperation on the part of the Federal enforcement agencies on the other hand.

How, I ask you, can the State game warden be expected to whole heartedly enforce these regulations and at the same time retain the respect and cooperation of the sportsman and the citizens in the communities in which he has to live, when a high Government official connected with the highest judicial body of the land is found hunting water-fowl without a Duck Stamp and the affair is passed off a s a good joke--when the small hand full of Game Management Agents of the Biological Survey have their hands so tied with governmental red tape that they cannot even set up a decent example in the way of enforcement of these regulations--when these same Game Management agents can hardly file a complaint for a violation of the Duck Stamp and gun plugging regulations, laws they have taken an oath to enforce.

If the State Game Departments must do the major share of the enforcement of the Federal acts and regulations affecting Migratory Water-fowl it is only fair that they should receive the utmost cooperation from the Bureau of Biological Survey. I think that most of the members of the Survey are individually doing their utmost to render assistance and cooperation. Unfortunately the same cannot be said of the organization as a whole. Judging from the experience of the South Dakota wardens who hold appointments as United States Game Wardens, little or no effort is made by the Bureau to keep in touch with these appointees. Most of our men received their Federal appointments five or six years were ago. They were furnished with instructions for their guidance in the performance of their duties and for two or three years were sent blanks on which to make an annual report of their activities. They were also supplied with copies of the current regulations and with bulletins listing the activities and accomplishments of members of the organization thought out the country. For the last two or three years, however, so far as I know, few of these wardens have received any of this material. The instructions furnished them are now out of date and they have never been officially advised as to their powers and duties uner later acts such as the Duck Stamp act, etc.

These matters are only mentioned to bring out the need for closer cooperation. Perhaps there are good reasons why some of these things have not been done, but it is my thought that if the need of this cooperation and these changes in policies and regulations be urged by this association, much good might come from such action. I believe that both the Biological Survey and the State Game Departments as well as the hunting public would all benefit if some of these changes were to be made, and possibly our recommendations will help the Bureau to obtain the increase in enforcement personel that they

need so badly.

Mr. Johnson: Now we come to that part of the program where this group will go into discussion and it might be well, so far as possible, for the various State groups to get together and make some definite recommendations as to what should go into the resolutions which we will send to the Survey. I have here a copy of the Federal regulations which might be helpful to the Committee in preparing the resolutions.

I am also going to name the committee again which is to prepare the resolution we are to send to the Biological Survey. They are Chas. McFarlane, Minnesota, chairman; Ernest Swift, Wisconsin: George Walters, South Dakota; D. W. Hulterstrom, North Dakota; M. L. Hutton, Iowa; M. M. Sullivan, Nebraska; T. M. Lynch, Illinois.

Now I want to turn the meeting over to Ernest Swift of Wisconsin who will conduct the discussion.

Mr. Swift: I was called upon to preside at this discussion on waterfowl and not to make any remarks but in listening to these discussions and some of the papers this morning and this afternoon, certain thoughts have arisen in my mind and so I am offering some extemporaneous ideas and even though what I have to say may differ from the expressed thoughts and I seem to be sticking my chin out, I am going to say it.

This association is here to make certain recommendations and up to the present time I haven't heard anything said about how many ducks there are. Possibly there are a great many ducks, possibly not so many but I think one of the pertinent things that Conservation Commissions or departments should do, is to act upon facts, there should be a preponderance of evidence beyond a reasonable doubt, to establish the necessity of any type of regulation.

I think this concerns the State Departments and their own problems, just as much as the Survey whether it has to do with the migration of waterfowl, the number of deer, or upland game birds. Whether we admit it or not, there are several things that enter into determining a game season. The first is the facts in the field; that is, just what is the number of birds in the field, the conditions surrounding them, is there plenty of water, food and cover, and whether there is a surplus of any particular species or whether there is a dearth of supply. Second; the regulations governing the taking of the game, which have to be determined, and finally, if we admit it or not, there is the matter of public opinion which comes in. So, again I say there are three things to be considered.

First--Facts in the field.
Second--The type of regulation most beneficial.
Third--Public opinion.

I think the field man is a very important factor in game research.

The average field man, be he called a game warden, enforcement officer, is equipped to assemble these facts and the majority of them have these facts at their disposal, and they are able to get the information for your pathologists, biologists, etc.

I was in the field a number of years. The university scientists used to come out to get facts regarding game conditions. They came to me and Devine, another warden in the field. Whether it was a compliment or whether we knew what they wanted to know, they felt we knew and came and asked us.

The man who spends 365 days in the field has to be recognized and his opinion respected. I do not think the opinion of the three or four biologists can over-weigh the opinion culled from a group of 50 to 100 field men.

There are many ways to come to certain conclusions as to whether there is sufficient of a species to kill. There are deer drives which minnesota, Wisconsin, and Michigan have carriedon. There are various Commissions to be considered and certain scientists and experts whose opinion must be considered; biologists have an angle, but you cannot overlook the field man.

When I was in the field, I kept a diary of facts relative to all species of game in the area, what was happening to them and I had my information available all the time.

In Wisconsin we have county game Committees. These are elected in each county and we have an annual meeting at Madison in connection with game conservation, our wardens attend this meeting. Now I think these wardens should be fact finders and should present these facts to your department or your committees in whatever arrangement you set up.

This spring I went into the field and contacted all of the wardens and rangers in our division of Forestry and instructed them to keep a diary the year around so that when they came to the meeting and we called upon them, instead of scouting around to get this data, they would have available certain salient facts, which would be the result of long observation and we could add them up and come to some conclusion as to what was happening.

And I think that in coming to a meeting of this kind, that the various States should have facts instead of trying to guess. I am not saying you are trying to guess, but it appears to me after attending meetings local, state and national, that many times there is a great deal of guessing.

I have no fight with the Research man, but I do now that in the past year there have been research men sent out by the Federal Agencies who had only technical education and no field background and I am not saying this because the Survey is represented here. They tie the field man up with the researdh and administration. The man who administers the law must have the facts and find them out. He must keep away from

influencing public opinion. You must find out what is going on in the field before you can come to an honest conclusion as to what to do.

Now as to this discussion, I think I should call on the various States and have them give their ideas and figures on what they feel are the conditions surrounding migratory fowl in their State and what they feel should be proposed as to regulations.

Mr. Lynch, Illinois: I understand that the Biological Survey is going to move up quite promptly on the new regulations. If this association is to send a telegram to the survey I believe it would be in line to suggest that the result of our deliberations go forward at once so that the chief of the survey would have it tomorrow.

Mr. O'Connell: I just received this telegram from Washington which was forwarded to me from lincoln-- "We would like to have an expression from you by wire as to which of the following dates you would prefer for the waterfowl season. October tenth to November eighth or November first to November thirtieth.

Signed Gabrielson.

This would indicate that those two dates are what they have in mind for the two zones, the northern and southern zone. The fact that they have asked for a wire reply would indicate they want a quick reply. I would suggest the Secretary send a wire informing them our recommendations will be forwarded tomorrow.

Mr. Swift: I am going to call on Iowa for their suggestions and facts.

Mr. Schwab: I don't think you want any long drawn out discussion on this. Our conditions in Iowa regarding waterfowl are excellent. We had very poor shooting last fall, but we think we have from ten to fifteen percent increase in duck population this year and it seemed to us that the spring flight was about ten or fifteen percent larger. We have more ducks nesting in Iowa than we have had for years because wh have plenty of water and feed in our marshes and we have been taking care of them. This has brought more ducks than we have had for years. We have a lot of blue wing teal, mallards, pintails and shovelers and quite a few redheads. That surprised me when the men in the Research Department found a number of redhead nests and fewer canvas backs. We expect to produce more ducks than for years and estimate ten to fifteen percent over last year.

Water conditions are better, most of the lakes, slues and marshes are in fine condition.

Mr. Swift: For the benefit of the Committee would you care to recommend anything about the season or regulations for taking of ducks?

Mr. Schwab: The majority of ducks in Iowa I would say are blue wing teal and then shovelers next. Mr. Hutton tells me he has received a telegram from the Survey and in selecting dates for the season, we in Iowa would be in favor of October 20th to November 20th. We think that is about the right time for the

open season on water fowl in Iowa. I know these days are not the ones mentioned in Gabrielson's wire but they are the ones we prefer. However, so far as the telegram is concerned, our commission feels that the dates October 10th to November 8th would be more desirable, but we would like to have October 20th to November 20th.

Mr. Lynch: What recommendation are you going to make as to Dates.
Mr. Schwab: October 20th to November 20th. We haven't decided definitely about other recommendations.
Mr. Swift: It might be a good idea to pick out one of these dates. It states these dates definitely in the telegram. I feel we should fix one of these dates at least.
Mr. Walters: ~~It might~~ Would you recommend anything as to bag limit?
Mr. Schwab: I think ten a day, even five a day are enough for anybody, of all species; that is, I mean species that are open.

Mr. Hansen: Minnesota. About two weeks ago we conducted a survey of our duck population, it was made by our game wardens, and it was the consensus of opinion that we have an increase of 50% in ducks over a year ago in our state. Even last year we noticed a marked increase in the number of ducks.

The question in our State revolves about the problem as to whether we want a season which will give us the early shooting, chiefly teal, or whether we want to get the late shooting when the blue bill flight is coming down.

Most of the sportsmen in Minnesota would prefer gettin in on the early season rather than take a chance on an early freezeup and be cheated out on the late flights. That holds true particularly in norther Minnesota where the duck shooting has been very poor. I believe I express the opinion of the majority of sportsmen in Minnesota when I say theywould prefer a season covering the entire month of October, from the first to the 30th. We would miss some of the northern flight shoot- but we would be guaranteed some of the early shooting on teal before they start on the flight south.

In our State we have considerable difficulty in enforcing Federal regulations that have to do woth the protection of canvas backs and redheads.

I feel as though the best method of obtaining the maximum results of protection for these species which are threatened with extinction is through the various field representatives and a campaign of education. I believe it is possible through organizations of sportsmen to so educate the people that they would realize these birds should be protected, but so far as regulations are concerned, they are difficult to enforce. I believe that all ducks with the exception of wood ducks should be open and by this method, while it may sound far-fetched, we could save those species that are on the decline.

In our State we have a few lakes which are peculiarly the

habitat of one species of duck; take for instance Lake Christian, for if you go there, you will find nothing there but redheads. Why, we don't know, and in another lake we have only canvas backs. Now in those instances I think the Federal protection of the redhead and canvas back is a fine thing but as a general rule all over the State, it is difficult to enforce the regulations governing the kill of protected species and many are killed and allowed to remain in the water.

If any further protection is granted and an increase noted under this protected state, why not make a closer check on our duck population, and then see to it that certain species are more thoroughly protected and make it difficult for anyone killing a protected bird.

I am inclined to go down the line with South Dakota so far as the opening hour is concerned and I would cut out all evening and afternoon shooting and open the shooting at an early hour in the morning and in that way we would get away from considerable difficulty in the matter of enforcement. I don't know how the 7 o'clock hour is going to work out but if any change is made I would be in favor of the suggestion of our friends of South Dakota whose suggestion was made just a little while ago.

Mr. Swift: I would like to ask Iowa what they think about the shooting hours.

Mr. Schwab: I think we would follow the recommendation of Minnesota, that if there is any change in the present law, that shooting should start at sunrise and end at twelve noon, or two o'clock would be preferable. I don't believe the opening day shooting time should be set at noon.

However, it is quite a problem. It is difficult to enforce some of these shooting times, you can't very well secure a conviction if some fellow starts shooting a few minutes before opening time. The whole thing ends in a wrangle about the correct time and what is the Warden to do, and he can't tell who started it in the first place.

I will say that in Iowa our sportsmen have been pretty good about it. I was at Lansing last season and the first shot was fired at one minute to seven. We have had fine cooperation from our sportsmen.

Mr. Swift: What recommendation would you make to the biological survey as to the season dates, Mr. Hansen?

Mr. Hansen: October 10th to November 8th.

Mr. Swift: All right let us hear from Nebraska. I think Dr. Sullivan is chairman.

Dr. Sullivan: I believe I would prefer to have Mr. O'Connell speak for us.

Mr. O'Connell: Our commission so far this year has not made any recommendation, in fact, we haven't had an opportunity to discuss the matter, so I will have to speak personally. I think I can express the will of the Commission.

We agree with Iowa and we would prefer and would recommend October 20th to November 20th to either of the dates referred to in the telegram. We believe this is a little too early and I think our telegram in answer to this would be to that effect.

As to the hours of closing shooting in the day, I do not believe we would make any recommendations. Some of our river shooters would like to have it early, some of our lake shooters would oppose the closing of shooting in the afternoon. We would like to please both groups of sportsmen, because so many of our city sportsmen drive hundreds of miles to the sandhills for the lake shooting. It wouldn't be fair to them.
We have not had any serious problem in enforcing the regulations on canvas back and redhead. I doubt very much if we would recommend any change in that.

Mr. Schwab: Do you have an increase of ducks in Nebraska?
Mr. O'Connell: Our field men are all agreed there is an increase. Not so much as in South Dakota and North Dakota. Our sand hill area which is the best area has not grained the water level which is true in these other States although there is a marked improvement. Most of our lakes do not have a sufficient water but there are many more ducks than in former years, although there are scarcely any found in the southern part of the State, but I would say over all there are at least 25% more in the State.
Mr. Walters: What about the bag limit?

Mr. O'Connell: We would not recommend any decrease. Many of our eastern hunters go a long way to shoot and I don't think it would be fair to them if the ducks are increasing. We wouldn't want to recommend any decrease I am sure.
Mr. Swift: What about North Dakota?

Mr. Hulterstrom: What I have to say is more or less guess work, we have only been in office four or five months. We have not had an organized field force and so we have found it impossible to get an organization completed to make a systematic survey. We have had to base our suppositions on field reports. I would say that we have an increase of twenty-five percent of birds this spring, naturally because we have sufficient water.
As to the season, I think we would favor an earlier opening date for the season in North Dakota because in some seasons we don't get any chance at the northern birds whatsoever. If there is going to be a change I would like to see it from October 1st to October 30th.
Mr. Walters: What about the bag limit?

Mr. Hulterstrom: I think ten birds of all speciesis sufficient. I believe too we differ somewhat about shooting hours. If there is to be a change made I would agree with Hansen and make it from sunrise to noon. You would encounter little difficulty in enforcing this regulation but it is rather difficult to determine just when the sun rises, and if you make the opening

time a half hour before sunrise you will have plenty of argument.

Mr. Rudrud: One thing in North Dakota, during these dry years, we haven't had any water in the slues. When I spoke this morning I didn't go back into the period when we had an unlimited supply of ducks.

Now we have water in every waterhole and slue but in spite of that thousands of acres of water have been taken away from North Dakota sportsmen, and those areas are going to be closed again. Up in North Dakota the thing sportsmen cry most about is the late season and that is not to be wondered at. When they did not get two days duck shooting it cannot but be natural they have an axe to grind, and we have quite a few who wrote in and damned the Fish and Game Commission and the Biological Survey for taking the water away from them.

It is not a question of a limit anymore, but a question of getting any shooting. Some of you have the reports of the Fish and Game Commissions. You go back to 1934 and under the heading of Recommendations for Legislation, and you will find that we recommended legislation at that time that we start shooting at 7 o'clock and quit at 4 o'clock. That was in 1934, and now that has become a fixed time and it is a big improvement so far as North Dakota is concerned to start shooting at 7 o'clock than it is to try and find the sun on a foggy dark morning, or carry some little card and try to find it. With this sunrise shooting you get out and you know it is somewhere near the time and then somebody starts banging away, and there you are. I know and so do you know how that makes you feel, but with a definite time like 7 o'clock, most of the hunters wait for the proper time to start shooting. We have found 7 o'clock is far more satisfactory than it is to guess what time the sun comes up.

As to the survey of ducks up there. The Commissioner never goes out of his office to visit some part of the State unless he is warned, "So long, Commissioner, don't forget to check up on the ducks." He hasn't since early spring. We tried to get the best survey we could. We recommended a later date for this meeting so we might be able to tell you more definitely the true conditions of ducks in North Dakota.

So far as the number of ducks we have is concerned, we have a lot more than in previous years. Not so very long ago a duck census program was suggested, and we thought it a good idea, but we have never had any experience in it and a lot of our available help didn't know the difference between a spoonbill and a mallard. Others couldn't find a mallard in the Red River Valley.

That was why we got out letters. We wanted to get the information from the small farm conservationist and his judgment of the number of birds on the nests this year. We wanted to get it from the dirt farmers out there. Most of these people are out there and see these birds every day. There is no doubt but what we have the birds, but conditions are not the same as they were last year. Then we had absolutely no water in the

slues and potholes and the ducks didn't stay there. This year we have the water and ducks are there.

As to the protection of species, I believe it is a custom of most hunters to shoot first and identify them afterward. The wood duck doesn't bother us. I never saw a wood duck during the spring in North Dakota, and don't believe there are any. The species most rapidly disappearing in North Dakota is the ruddy duck. They used to be plentiful and you know how beautiful they are. But now you come up to a slue or lake and may find one pair. During the drive from Bismark to Sioux Falls we saw four ruddy ducks. That doesn't mean that is all there are. We have tried to get a true picture for you and know we have a larger number of ducks than heretofore during the last four or five years.

So far as designating the kind of species they can or can't shoot, I have found they paid very little attention to it. If a prohibited specie is shot nobody owned it, it just fell down and died.

Mr. Swift: All right - let us have the report from South Dakota.

Mr. Hohnson: During the week in May our wardens made a careful check of ducks in the State and it is our opinion that this report represents quite accurately the nesting ducks in the State. Only male ducks were counted. We felt certain that our census was pretty accurate. Use was made of the organization we had developed in our crow control campaign. The Committees were divided into districts and the wardens had the cooperation of the men who helped in crow dontrol(~~campaign.- -The Gemmi~~) The number of ducks this year is much larger than last year, from 50% in some districts to 300% in others, and larger generally compared with the normal number of ducks.

We found the largest number of pintails and blue wing teal, following this came shovelers and mallards, and in view of the fact that teal are so plentiful we want to see an early season so we recommend an opening day on October 1st. Our hunters feel the teal would have left the State by the middle of the Month.

I believe our regulations should be so arranged as to be readily understandable. I believe the majority of our sportsmen would like to see an earlier shooting hour in the morning and extend only to the middle of the day. We have made little attempt to recommend opening hours, because as I have said many times, the change in time belts in our State makes it very confusing particularly as the time belt change runs right through our duck shooting area and it would be difficult to enforce the rules.

As to the protection of Species, I think the wood-duck should be continued on the protected list but I would rather see a reduced bag limit than cut down the season or curb the varieties as we had last year.

Mr. Rudrud: How many ruddy ducks did you find?

Mr. Adams: 715 I believe. But this count is incomplete, only ten counties are included. That would represent 715

pairs in ten counties.
Mr. Hutton: How accurate do you clain this report to be?
Mr. Adams: I would say very accurate. In some counties it is true we covered only 5% of the area, but this area is the duck area, but in most cases it is safe to assume that 75% to 80% of the ducks was covered, it should be accurate.
Mr. Hutton: Is this 75% to 80% of the duck area?
Mr. Adams: No. 75% to 80% of the total ducks, and approximately 100% of the water area.
Mr. Johnson: Possibly twenty to twenty five percent more ducks are to be found there than that report indicates.
Mr. Grimmer: How does that duck census compare with the total kill?
Mr. Adams: We don't have any way to compare that.
Mr. Johnson: We have no way of checking on the duck kill, but we do check the pheasant kill by ammunition sold, shipping tags and personal interviews.
Dr. Sullivan: Your opinion is then that there should be no definite hours set for morning shooting.
Mr. Adams: I believe it would be more acceptable to the hunters where we have a change of time. It encourages disrespect for all regulations.
Mr. Hansen: What is the general opinion of the sportsmen as to the three shot gun.

Mr. Adams: It is very unpopular, and I would say 90% are opposed to it. A good many of them took it in good spirit, but it is difficult of enforcement unless you make a thorough examination of the gun. You have to make a complete check of the gun. It was about the worst thing about the regulations. Some, of course, we would check to see if a gun was plugged. Gut the hunter generally resents the inspection of his gun, and feels that it was a very unfair restriction.

Mr. McFarlane: Do you think you can enforce the protection of the wood duck better than on the canvas back and the redhead?
Mr. Adams: Yes.
Mr. McFarlane: Does your census indicate any increase in the wood duck?
Mr. Adams: Yes, we have two pair.
Mr. McFarlane: You are in favor of prohibiting shooting wood ducks because you don't have any?

Mr. Adams: I believe even the sportsmen protect the wood duck without regulations. If there is a shortage of a variety of ducks, the prohibiting regulations may prevent some hunters from shooting them, but if it is generally known there is a scarcity and the sportsmen are educated to it, they will refrain from shooting. The varieties with greater numbers will be hunted and a larger number killed. We find the average hunter in possession of a protected bird didn't go out hunting it, but couldn't distinguish it from others in flight.
Mr. McFarlane: Do you think it wise to give the hunter greater freedom in regard to protected species?

Mr. Adams: I think it is of educational value and the hunters are glad to get any information which will make them better

acquainted with the laws. The average hunter is not capable of making a distinction and most of the trouble we had was with old duck hunters, men fifty to sixty years old, who have a dozen names for one duck, in instance they might call it a blue bill, Black Joe, butter ball, etc. I don't believe there is so much of a chance to mistake a wood duck.

Mr. Adams: We believe if you start your shooting day at daylight your chance of killing our two pair of wood ducks is pretty remote.
Mr. Grimmer: You think there should be shooting before daylight?
Mr. Adams: No, not before daylight.
Mr. Hutton: Why do you object to the seven o'clock opening rather than daylight? It seems to me the point of a definite hour was well taken. Why do you object.
Mr. Adams: I will agree that 7 o'clock is better than sunrise or one half hour before, but my argument is that you can't enforce it, especially if you have a change of time such as we. Here you are able to shoot at 7 o' clock and the man on the other side of the river has to wait for another hour. You can hardly blame them if they shoot. I am heartily in favor of some regulation we can enforce. What is the difference between one side of the river and the other except in the time belt, and then your river winds back and forth and through the time belt. It is confusing to say the least, In fact in our change of time belt they say they have three times Central time, mountain time and a hell of a time keeping track of it.

Mr. Hanson: Why wouldn't sunrise be all right?
Mr. Adams: It changes from day to day and how far are you going to get in court with a violation when you have this variety of times. You can't get anywhere at all.

Mr. Willard: Why not permit them to begin shooting at daylight? Is that any more difficult than sunrise? If you are going to let a man kill five or ten ducks a day, why not let him do it?
Mr. Adams: We would like to give the ducks all the protection we can.
Mr. Johnson: I wonder who would lose by shooting before daylight, the hunters or the ducks? He is not getting any more ducks so far as I can see. We have more ducks and they are more widely distributed. You have probably had the same experience I have of sitting in a blind waiting for daylight, and then some fellow below you blasted away.

So far as I am concerned I agree with Mr. Adams. The more simple we make our regulations, the more respect we get for them. Wehen we say seven o(clock and someone starts shooting 15 seconds before 7 o'clock, it isn't long before some one shoots 15 minutes early.

In simplifying these regulations and removing the danger of a hunter unwittingly becomes a criminal, we are going a real service. We can make them so complicated that a hunter will

trade his gun for a set of golf clubs.

He is supporting your Conservation Department financially and morally. I agree with Mr. Adams. We have compared notes with a lot of men and we do not believe the recommendations of this organization should be radical or get much away from last years regulation. We think they should be simplified, respected and enforced.

Mr. Spencer: How many convictions have you been able to get for shooting before opening hour as compared to convictions for shooting after hours?

Mr. Adams: How can you get convictions unless you have a warden at their elbows or have glasses on them all the time. It seems to me it is practically impossible. That is what we are up against. If you happen to see one and they shoot a little before time, their excuse is that their watch was a little fast and you can't do a thing with them, or they tell you that some so and so down the river shot early, and they thought it was all right. There is no physical way you can find out about it. You have to spend half of your time listening to reasonable explanations and don't have time to administer the regulations as they should be. All anyone would have to do is establish the fact that someone else had been shooting before him and how can you get convictions on that sort of basis.

Mr. McFarlane: It seems that everything is revolving about a discussion of time, the closing of shooting, the starting of shooting. Why should it be more difficult to enforce the law about shooting early than the law about overtime shooting? In discussions like this we seem to tend to make it easier for the hunter. Why not go easy on the ducks? I admit the 7 o'clock opening has some difficulty attendant in its operation, but it should not be more difficult to enforce.

Mr. Swift: Let us hear from Wisconsin.

Mr. Grimmer: Our Duck situation is about as follows: One hundred percent increase on blue wing teal, mallards and shovelers about the same in coots and diving ducks, and wood ducks least.

I don't want to be obstreperous, but I think I appreciate quite fully the trouble with these regulations, but in Wisconsin we have something like 8000 lakes ranging in size from smalll potholes to those that are really large, and we have ducks on most of these and hunters on more than half of them during the season. Unfortunately for the average duck hunter, he has not learned how to build a good blind. On most of these lakes you can look half a mile across and see the blinds. That is a good thing for the ducks, but I don't know how North Dakota and South Dakota educate those mallards, blue wing teal, etc. to keep away, but it is a pretty hard thing to get those fellows to come into the blind. If your blind is located on the right type of duck lake, you can get them in, especially if they use ten, fifteen or twenty block decoys, and I might recommend the use of three or four live mallard decoys.

On the canvas back and redhead situation in Wisconsin I must differ again. Devine realizes that this situation has cost

him a lot of grey hair. Wisconsin has a few canvas back and redhead laikes, especially Winnebago and here these two species come in about October 10th and stay there, sometimes for the whole season. It is not unusual to go to the lakes and see at least 25,000 canvas back ducks and a great many blue wing teal. We have not suffered the decrease in canvas backs as reported by other States. I believe we could stand a kill of 50,000 birds. We do not feel that we cannot afford to lose them. Wisconsin stands pat on the recommendation of an open season on canvas back and redheads and ruddy and wood duck. Hope your recommendation would include this and it would if you could come and see the birds on the lake.

We recommend the shooting season from 7 o'clock to 4 O'clock at the latest and would prefer the closing as early as 3 o'clock.

In regard to geese, we realize the Biological Survey makes a count each year. We could make a separate count of these birds each year, and do it through our Game Committees and our Committees are in a position to do a pretty good job, but it would be the same thing as is fone by the Biological Survey. We are having some complaint from hunters who feel that southern Wisconsin should be open for goose shooting, and thus it should be zoned with Illinois.

Mr. Rudrud: If the Biological Survey recommended a season that left all species open to shooting except the sood duck would there be anything to stop individual States from protecting other species, the same as they do the game bird?

As I understand it, we can cut down the limits set by the biological Survey, but we can't increase them. I understand that the State of Wisconsin is heavily populated, and has a lot of hunters and gets a lot of revenue, while the situation is reversed in North Dakota where we are financilly busted. We haven't so many hunters and the revenue is small, but out there it seems to be a fact that the majority don't pay any attention to that regulation pertaining to the shooting of certain species. So far as I am concerned it is not a case of being contrary but it is a case of trying to satisfy the sportsmen and North Dakota sportsmen are against the protection of certain species and feel there is a possibility of getting up to 4 or 5 species. Possibly it is a case of North Dakota sportsmen not being as good sportsmen, but I think it is because they are not able to tell what the birds are 40 to 50 yards in the air. I don't believe we should overload ourselves. I admire the regulations we have set down but it seems to me we are going back and forth. That has been our fault, we made so many technical regulations that we have driven the hunters away. Many of them have got themselves some L. C. Smith golf sticks, traded or sold their gun and are out playing golf. So far as North Dakota is concerned, we have not had many hours shooting, and we advocate the 7 o'clock opening. I know our men will try to be satisfied with what they get, but if they get a season which doesn't give them any shooting at all, they are sure to object.

Mr. Swift: Mr. Grimmer what about the bag limit?

Mr. Grimmer: We would recommend the bag limit remaining the same as last year.

Mr. Willard: I am wondering where all this is going to lead us. We are about through on the waterfowl question and we will make our recommendations and the Biological Survey will study those deliberations. I am wondering what the people down around the Atlantic Seaboard and down South will think when that resolution is adopted.
We have eight States her, and also eight different suggestions and if we went into the different Committees we would find a difference of opinion in the Committees representing the various States. We have several questions here for settlement. One is the matter of daylight shooting. Mr. Grimmer gave us a suggestion on the live decoy, and what are we going to do about block ducks? Are we going to recommend beginning of shooting at daylight, a half hour before sunrise or at 7 o'clock? who knows the answer?

Here is the very heart of the great duck raising area of North America and if we are going to start in complicating our recommendations with half a dozen different suggestions, and modify the Federal regulations it is going to give the Atlantic States and the South the wedge they want.

I was surprised when I looked over some of these reports of duck stamps sold. The number ran pretty high in the Eastern States.

I think we are going to make a very serious mistake if we do not get together and not make any recommendation to change last years regulations materially. I know personally that our hunters would rather start half an hour before sunrise and quit at 9 o'clock, if they can be assured of a couple of days of good shooting, and they would even agree to decreas in bag limit.
If we are going to have zoning, why not run the zones so they will include the waters where the ducks stay at the right time, and while it will give some hunters 60 days, let the zoning be such that the ducks will be there for 60 days.

I think we should proceed with great caution before we start in changing last year's regulations because it will give the Atlantic Seaboard and the South something they have been looking for during several years.

I hope the Resolution Committee will consider any change carefully.

Mr. Swift: We should present an unfield front without too many changes. Now each State has had an opportunity to be heard. I think the subject is pretty well covered and I think we have been a lot of help to the Committtee.

Mr. Johnson: I am going to say that fundamentally we are agreed and if anything we are more conservation minded than

years ago. We argued these points in St. Paul and in Madison last year and I have the utmost confidence in my ability to appoint a Committee and I think this Committee are going out and come in without presenting a minority report. I believe certain modifications should be made without compromising our position. I am not going to make any suggestion, but I do not believe we can afford to shoot any more ducks or be less liberal than we were a year ago.

We have been a lot of help to the Committee, I think perhaps in bewildering it, but be that as it may, the Committee will give and take. If Wisconsin can't shoot canvas back they will simply have to forego shooting it. That is the foundation of our orgainization, we have been able to give and take, adopt resolutions unanimously, and we can do it again.

Now I want to announce again that this junketing trip is scheduled to leave the front door at 5 o'clock. There are plenty of cars and a motor cycle escort. I am going to ask Mr. McFarlane to announce the time and place of his Committee meeting.

Mr. McFarlane: Room 237, at 7 o'clock.

Mr. Johnson: We will stand adjourned until 9 o'clock tomorrow morning.

SATURDAY A. M.

Mr. Johnson: Without any formality, we are going to work. Mr. Thompson of Illinois sent a prepared manuscript and Mr. Lynch was to read it this morning but he sent it down to the desk and said he would be down in a few moments. So we will again digress from the printed program. But before we go on with the program we are going to have our Resolution Committee report. I understand they agreed last night on the recommendations to the Biological Survey and Mr. McFarlane has the resolution and is ready to present it.

Mr. McFarlane: Your committee met and deliberated last night for several hours, and this is the result of their deliberations:

Read Resolution

RESOLUTION

The Midwest Association of Game and Fish Commissioners of the States of Iowa, Illinois, Minnesota, North Dakota, Nebraska, South Dakota and Wisconsin, at its meeting held at Sioux Falls, South Dakota, on June 12th, 1937.

Do Hereby Resolve:

(1) In the absence of accurate census data and a definite knowledge of the duck breeding ground conditions of North America and Canada, the limitations and restrictions imposed under the 1936 Migratory Bird Treaty Act regulations of the Bureau of Biological Survey of the United States Department of Agriculture shall in no

way be liberalized for the season of 1937.

(2) That the opening and closing dates for the taking of migratory waterfowl during the 1937 season be made identical in the states of Iowa, Nebraska and Illinois.

(3) That the opening and closing dates for the taking of migratory waterfowl during the 1937 season be made identical in the states of Minnesota, North Dakota, South Dakota and Wisconsin.

BE IT FURTHER RESOLVED, That a copy of this Resolution be sent forthwith to the Chief of the Bureau of the Biological Survey of the Department of Agriculture.

BY: Oscar Johnson, President

John R. Foley, Secretary

Mr. Chairman, I move the adoption of the report.
Mr. Johnson, You have heard the report. Is there a second.
Mr. Spencer: I will second it.

Mr. Johnson: It has been moved and seconded that this resolution as presented to you be adopted. Under the Constitution and By-Laws of this Association, the vote is by States. It just occurred to me that the state groups might want to caucus if there is any argument about the resolution. Also I believe in this event it might be well if the resolution were acted upon by paragraphs rather than in total. There might be no objection particularly to Paragraph 2 and 3, but an objection to Paragraph #1, so we might better act on paragraphs rather than the resolution as a whole. What is your wish? Are you prepared to vote on it without further discussion or caucussing. How about North Dakota.

Mr. Hulterstrom: I don't exactly agree with the paragraph regarding the season.
Mr. Johnson: There is nothing said in this resolution about the opening day. Is there anyone else here who feels that the Resolution should be more specific, as North Dakota has expressed it. We are liable to get into a lot of argument and I understand that the Committee had a lot of pretty warm arguments. Personally, I believe the Resolution Committee has performed a very commendable service.

Mr. Blizzard: It seems to me that the Resolution still leaves the way open for each state to make a recommendation to the Bureau of Survey.
Mr. Rudrud: Would you mind reading it again. I didn't hear it the first time.
Mr. Johnson Read the Resolution Again.

It has been moved and seconded that the resolution be adopted as read. All in favor signify by the usual sign. It is so

ordered. The resolution has been adopted and as Mr. Foley, our Secretary, has returned to his home, I am going to appoint Mr. Chas. McFarlane, Acting Secretary, and ask him to see that transcript of this resolution be forwarded to Chief Gabrielson at once. Miss Cook will assist him.

Is Mr. Lynch down yet? I guess he isn't, so we will go on down the program and listen to a discussion of Methods of Predator and Rodent Control by Mr. Frank B. O'Connell of Nebr.

Mr. O'Connell: This subject is quite a long one, but I haven't much to say about it. In our state we haven't had a great deal of predator control work to do, but we are undertaking some of it now. We have felt it advisable to do more work with crows.

There is considerable agitation among sportsmen about the crow. We aren't just sure how much damage he does, but we do know that he does some damage and crows have increased very much in Nebraska. We have been eradicating them by three methods in Nebraska.
One of these is by dynamiting the roosts. In this method the hunters go into the roost and put charges of dynamite in the hedges and trees. It is an expensive and dangerous method and our Commission had done none of this work. It has all been left to the local sportsmen.

Then we have the organized hunt method which has probably resulted in killing off more crows than any other. These organized hunts are conducted by the local sportsmen who enlist the aid of large groups of hunters and then get into the roosting place early in the evening and start blazing away when the crows have come into the roost. The birds will fly up a little settle back and keep this up indefinitely.

Quite often these hunts are aided by airplanes. The airplanes herd the birds back to the roosts. I attended one of these hunts where 3000 shots were fired in ten minutes and the result was 10,000 dead crows. It is quite an exciting experience, especially for the boys in the airplanes. I distinctly heard the shot spatter against the wings of the airplanes as they were flying low and herding the birds into the roosts.

We have an optional bounty in Nebraska. The counties can pay five to ten cents on crows if the country board so decides. That has been done in very few cases, however, because of the very heavy relief load that the counties have had to carry.

According to all of the information we have, there are two types of crows, the winter crow and the summer crow, which goes south in the winter time. I think that these latter which come back in the spring and summer do the most damage. I believe, too, that a large part of the increase we have had in the number of crows in Nebraska is due to the migration of the birds from the Dakota because of lack of feed.

We have quite a few coyotes in the western part of the state and the Federal Government has gone in on the Valentine Water

Fowl Refuge in Cherry County and eliminated a lot of them. Most of it has been done by trapping on the part of the Government, but quite a few are killed by dogs, and from airplanes. This airplane hunting is carried on quite extensively in the western part of the state. But as I said, the majority of them are trapped.

Then too in Nebraska we have a lot of jackrabbits. Especially in the western part of the state, and lately in southeastern Nebraska. In some localities in the southeastern part of the state we have organized hunts with clubs. We have taken up to as high as 5000 jackrabbits in one hunt. Their pelt has some small value.

We had quite a problem with beavers. We do not consider the beaver a predator, but there is no question about it that he does destroy trees and in some parts of our state, the farmers are anxious to keep what few trees they have. But when we began to receive complaints about the beaver damage and investigated these complaints we found that the trapper, the commercial trapper does most of the agitating to have the beaver killed so that they could get the pelts. However we got away from this agitation by getting a bill through our legislature similar to the South Dakota bill. If we decide to permit the killing of 1000 beavers, we issue permits to do this and the pelts are shipped into Lincoln.

After they have been received we hold an auction. We intended when this legislation was passed that the state was to get one third and the farmer two-thirds of the money resulting from the sale, but somehow the legislature reversed the figures and now the state gets two-thirds and the farmer one-third.

When the bill came up for the governor's signature, he called me and wanted to know if it was all right. I told him that the intent of the bill was all right but that there had been a mistake made which he would probably hear about because of the reversal of the figures. Since the bill had its good points, and we could correct the figures later, it was signed.

We are doing some work on rodents. They have been doing a lot of damage, especially on new plantings and seedlings. The pocket gopher is doing much damage to young trees but after the tree is established, it is all right. Our seedling loss is heavy. We are using the poison grain method of extermination. Moles have also done quite a bit of damage but the pocket gophers are the worst. We are attempting quite a campaign of control in this connection.

I believe that about covers all we are doing in Nebraska on predator and rodent control.

Mr. Hutton: Do you do anything about grasshoppers and the damage this grasshopper poison does to bird life.
Mr. O'Connell: I think every state uses the same poison bran formula to combat grasshoppers as is recommended by the government. However we have found that where this is used properly, there is no damage to bird life.

Mr. Johnson: We have Professor Severn with us this morning and he told me there was absolutely no danger to bird life, and he was thoroughly convinced after a series of tests, that if the poison were used as directed, it would do no damage to birdlife of any kind.

Poison can be misused and if it is misused it can be dangerous. If it is not properly prepared and put out in accordance to the methods recommended, it might be dangerous to domestic fowl and wild bird life.

Mr. O'Connell: We have found that farmers often get it to wet and when they spread it in these wet masses, in chunks or piles it becomes dangerous. If just enough moisture is put on so that it will become moist, and still broadcast evenly and not in chunks, it is all right. I put some of this poison out a couple of weeks ago in a little garden we have. My neighbors chickens got into the garden and the only thing I could notice was that they seemed to be getting fatter. It didn't seem to hurt them. I have sometimes wished that I had made it a little wetter or thicker.

Mr. Hutton: Do you use poison to eradicate the coyote.
Mr. O'Connell: No, we do not use it.
Mr. Hutton: Does the Federal Government use it.
Mr. O'Connell: No, they don't do any of it with poison. The only place in Nebraska where they have attacked the coyote is on the Valentine Water Fowl Refuge and they would not use poison there.

Mr. Knowles: I believe that all predatory work in Nebraska is done by trapping.
Mr. Johnson: In your rodent control work in the forest areas, is that under the supervision of the Employees of your department.
Mr. O'Connell: We have several national forest in the state which are under the control of the Forestry Division of the Government and the work there is under their supervision, but in our own plantings on state owned property, it is under our Commission.
Mr. Rudrud: In your beaver work, do you have complaints from farmers that the beavers are cutting trees down and damning up brooks and little streams and drainage ditches.
Mr. O'Connell: The only complaint we have is relative to the cutting down of trees. We have made investigations in the western part of the state where they have difficulty in raising trees, and we recognize the danger of the beaver to these areas. In the Eastern part of the state the tree coverage is more, and the danger to the land is not so great. We have had some trouble with irrigation ditches where the beavers have damaged the ditches.

Mr. Rudrud: Have you had any experience in moving the beavers to some other part of the state.
Mr. O'Connell: South Dakota has carried on that work quite successfully, and we are trying to transplant some.
Mr. Hutton: How far do you move them. What is your method of transplanting them?

Mr. O'Connell: The beaver increases quite rapidly. Our transplanting has never been done over a wide area because of the fact that the entire state of Nebraska is a good natural habitat for the beaver. I might add that they are increasing rapidly in spite of the fact that we have issued permits each year for the killing of fairly large numbers.
Mr. Blizzard: What effect does the beaver have on the muskrat?

Mr. O'Connell: Most of the muskrat land in Nebraska is in the Lake country while most of our trouble with the beaver is along the streams. Any reservoir of water is a natural habitat for the muskrat so I would say that the beaver has but little effect upon the muskrat population.

Mr. Willard: Is the beaver listed as game to be taken during the open season?
Mr. O'Connell: Beaver can only be taken in Nebraska where they are doing damage, and then only the control of the Commission. We investigate every beaver complaint that reaches our office and immediately send a field man to investigate.
Mr. Hutton: Are they generally found all over the state.
Mr. O'Connell: Yes, but more particularly in the Platte Valley. But the beaver habitat in Nebraska covers the entire state. I should like to ask Mr. Johnson how they go about this beaver work in South Dakota.

Mr. Johnson: When we decide to transplant beaver the locality to which they are to be taken is carefully selected and posted. Our arrangements for transplanting are then made by digging a temporary den into the bank of a stream. We employ only expert trappers to take the beaver and we try to do this without injury to the beaver. It isn't such a difficulty task.
Mr. O'Connell: I will say that the beaver will take hold any place if the trapper will let him alone.
Mr. Johnson: Well, I must add that whenever we do any transplanting we always put the beaver into area where they are desired. We do have a great many people who like to get the beavers on their land.
Mr. O'Connell: Do you have any complaints of the beavers damming up streams and flooding hay meadows, etc.
Mr. Johnson: No.

Mr. Rudrud: We tried a beaver transplanting program and in order to find out just exactly how to go about this we called upon Mr. Johnson, and he cooperated with us by sending his trapper warden up. We trapped ten live beaver and moved them into the Eastern Part of the State. The streams had been cleared out by the C.C.C. engineers. There was nothing left to hold the banks of the streams. We put the beavers in and it didn't take long before we had ten or twelve beaver dams. Since that has happened the beaver have moved over the the Park River about twenty miles north, and they have also moved twenty miles south to the Turtle River. I know it is absolutely possible and feasible to move the beaver.

I do not believe we should destroy any of the beaver. In the Eastern and Western part of our state they are begging for them. We find that where we have one complaint about the beaver which

is honest and because he is destroying a few trees, nine or ten complaints are from farmers who want him destroyed so they can get the pelt.

Mr. O'Connell: I have heard an expression in this connection which I believe is true and that is that the only enemy of the beaver wears spats.

Mr. Johnson: I would like to have a little more discussion on this rodent and predator control. I think this association can be helpful to the men in the field with the Biological Survey in their efforts to control grasshoppers, roden and predator pests. And I know that in the past they have been expected to do most of this work with relief labor. They are trying their darndest to save the crops and animal life of our states, and do it with labor over which they have no control.

I want to tell you that there is a lot of danger connected with this work. The ir-responsibility of this relief labor is noticeable all over the territory. We had a complaint from up in Hamlin County. A farmer had lost four fine horses. When we investigated the complaint we found that about a hundred pounds of poisoned oats had been stored in an old abandoned shed in March 1936, and permitted to stay there until this year. The horses broke into the shed, ate the grain and all four died. I believe you heard about it Prof. Severn. Now that is all charged up to the campaign which Mr. Knowles is carrying on and he didn't have anything to do with it.

Mr. McKenzie: It is quite a problem to solve. We are besieged on every side to do something to control the grasshopper. We had a report of a case where nearly an entire family died as the result of eating poultry and eggs because it seems that the chickens had been permitted to get into a lot of grasshopper bait. Now that is on record.

Mr. Johnson: I think it is a dead mortal cinch that if the bait had been distributed properly it would never have poisoned the eggs.

Mr. Willard: We had some tests made in this connection. We tried feeding it to a rooster and a turkey. The only effect it seemed to have on the rooster was to make him bigger and fatter. The turkey died.

Mr. Schwab: In Iowa last year we had quite an extensive grasshopper control campaign, and so we were interested in finding out just what effect it had on wild life, and one of our men was assigned to the problem and we have a complete report of that investigation. If any state commission would like to have a copy of our report, I will be glad to furnish it. The consensus of opinion was however that if the poison is properly handled, it will bot be dangerous.

We have had a lot of reports about this poison. It is like the one we received of an Iowa farmer who had a bull and six cows. He had some bait left over so he took it back of the barn and buried it. The bull and the cows managed to locate it, ate it, and the six cows died and and the bull was pretty sick.

The thing I want to say however is this, that if you want to look over the results of our investigations and tests, we will

he glad to send a copy to you.

Mr. Johnson: There aren't any regulations printed covering this. It all resolves itself about the little word 'if'. If it is properly distributed, if it is properly mixed. The statement is always 'if'. There are too many groups of men carrying out the campaign in the different areas, and we have no control over the men assigned to do this work,

We have some men from the Biological Survey here, and I don't want to put them on the spot. If they don't care to talk for the record it is okay, but we would appreciate a statement from them. We should like to have them tell us what we can do to help them. If we can do anything we shall be glad to do it. I wonder if we might have a word from Prof. Severn:

Professor Severn: Dr. Wilson of the University of Wisconsin carried on some experimental work by feeding poisoned bran to poultry. He carried on this experiment over a period of months. In some cases forced feeding of the poultry was resorted to, and in other cases he just let the poultry eat it as they wished. At the end of the experiment he got some volunteers to eat both the eggs and the poultry and in no case did they show any symptoms of poison.

Question: Are there any changes in the formula?

Prof. Severn: No, it is an arsenic preparation.
Mr. Rudrud: Can it be dissolved so that if it were broadcast adjacent to a lake in which there were a lot of fish, and because of washing be drained down in the lake, would it have an injurious effect upon the fish life.
Prof. Severn: There would be little danger as even if it were washed into the lake it would settle to the bed. If the lake were a shallow one it might have a little effect, but it is so remote as to be nil.

Mr. Johnson: Do any of you believe that this particular problem is of sufficient importance to be discussed further. What about Wisconsin. Are you going to have a grasshopper control program this year?

Mr. McKenzie: I think there will be a campaign, but it will not be an extensive one.

Mr. Schwab: We are going to have quite an extensive campaign in Iowa this year. I believe that there have been order for 4000 tons of material to carry out the campaign and we are very much interested in Iowa because the direction of the campaign is going to be in the hands of the conservation commission. What we are going to try and do through the Conservation Office, is help to educate the dirt farmer to handle the material in accordance with instructions and see to it that it is distributed properly to be the most effective.

Another thing we found in Iowa is that this grasshopper control work has a direct affect upon your wild life program. Where you have had a grasshopper infestation, it means that all of

the vegetation, the wild life suffers. In southwestern Iowa we had a section which was very heavily infested with grasshoppers. This past fall, we found there were hardly any pheasants in that territory. Heretofore it had been one of the best pheasant sections in the state. The birds had left the country. I am convinced that if this grasshopper control work is carried on properly it is beneficial to wild life.
We have found too that most of the farmers are interested in having birds on the farm because they do a lot of grasshopper and insect control work themselves. We killed some birds and posted them to find out what they were eating and we found them doing some very effective grasshopper work.

Mr. Rudrud: What is the effect of this grasshopper control work on pheasants.
Prof. Severn: We carried on some investigations on pheasants in South Dakota. We examined 285 birds which had been sent in to us from every locality. We got the majority of these birds in the closing three months of the year. We found that these particular pheasants had very, very few grasshoppers in them. Probably it was due to the fact that they were received dureing the latter part of the year. We received practically no birds in May and June when the pheasants were younger and of course when the grasshoppers were most active. But by the time these birds were sent to us the damage had been done and the grasshoppers were slowing up.

It has been our conclusion that the pheasant does very little good so far as grasshopper control is concerned.

Mr. Rudrud: The counties in the southeastern corner of the state are the only counties in the state where we have many pheasants. When the grasshopper campaign was it its height, and we made an investigation to find out where the grasshoppers had done the most damage, lo and behold, in those five counties in the southeastern part of the state where we have, I dare say 75 pheasants for every one in the other counties of the state, the grasshopper infestation was the lightest.

We took one of the pheasants, a mature bird and sent it to the laboratory. There were 339 grasshoppers and two crickets taken from this one pheasant. We were so surprised and it was such an unusual thing that we had it framed and this evidence is in our office at the state capitol today. This happened about the middle of the summer.

Mr. Hutton: This discussion seems to cover a lot of etymology and I wonder if it would be in order to ask if any of you have trees that are infested with the canker worm. We have it in Iowa and it is getting pretty bad among our elms, and it is beginning to effect the oaks and white birch. Have any of you encountered this trouble.
Mr. Johnson: We have Mr. McCutcheon here. I wonder if he would have anything to offer on this.
Mr. McKenzie: While we are on the subject of poison, I wonder if any of the states here have had experience in using poison in the control of rabbits.

Mr. Johnson: Yes, we have, We have had some very unhappy experiences. The results we obtained were as nothing compared to the criticism we received. Mr. Knowles and I have had a great deal of correspondence about this subject. We have data to prove that pheasants, and other wild game were poisoned as a result of the poison we attempted to use on rabbits, and the criticism we received was far from pleasant. We have this data checked and proven by state laboratories of other states.

Before the opening of the pheasant season, at the time this poison was used, we found many, many dead pheasants, morning doves, etc. We have enough of them analyzed to know that they died from Strychnine poisoning. The bait we used was rolled oats treated with strychnine.

The work was done with P.W.A. labor, and there again possibly is the answer. If it had been distributed properly and handled properly, it would not have been detrimental. We do know that the use of poison has set up objections on the part of the general public. The use of poison has been totally unsatisfactory so far as we are concerned.

I told you of the case where four fine horses died as a result of eating poisoned bran carelessly stored in an abandoned shack from March 1936, until May 1937. We have other instances where grasshopper bait which was not used has been stored and permitted to harden until it is unfir for use and is extremely dangerous. I know that control methods must be used in order to protect life, wild life, tress, crops, etc., but I don't believe that a grasshopper will leave a nice green shoot of grass and eat some sawdust and molasses, especially during a year like this.

My thought is that the Federal Government might make available better and more complete instructions relative to the use of these poisons and see to it that responsible people will be in charge of it and be supplied with responsible labor.

Mr. Willard: I wonder whether any of you are having the same trouble with caterpillars on your trees that we are having in Minnesota. We have thousands upon thousands of trees that are completely defoliated in Minnesota. These include poplar, birch, elm, and other types. These caterpillars seem to move by the millions. We tried everything but seem to be getting the best results with dusting machines. The legislature authorized the purchase of seven big spraying machines and they seem to be doing the job for us. We are using them principally around the various resorts in Minnesota just at this tiem. We are hoping that this sort of treatment will help us get rid of this worm. I don't know just what the cycle of this will be but I do know that if this defoliation continues year after year we are going to lose a lot of trees. It is a pretty serious problem in Minnesota.

These caterpillars lay their eggs in the fall around the branches and just as soon as the snow is off the ground and the sun comes out the eggs hatch into little maggots and they immediately go to work on the buds, the leaves, and the tree.

Our experts at the University of Minnesota and in the Federal Survey are working and looking for a parasite or some other means of staying this parasite. All our machine are working around the resorts. We are hoping that it is effective.

Mr. Johnson: Have you anything like that in Wisconsin:

Mr. McKenzie: No, not that I know of.

Mr. Hutton: We have a pest in Iowa which is attacking our elm trees and doing a lot of damage. We have been suffering a lot of damage.

Prof. Severn: You know we have two types of canker worms. In case of the fall canker worms, the moths come out in the fall. The canker worm isalooping caterpillar. It is minus legs. It spins down from the leaves and bout the only thing that can be done is to spray and dust the trees and bandage them with some sticky substance like tanglefoot. But the bandaging does no good but the tree must be fee of the maggot first.

Mr. Hutton: You spoke about dusting. Do you mean dusting by airplane.

Prof. Severn: It has been done in this way with some success where there are lots of trees, but in small places it is necessary to use a machine.

Mr. Hutton: I wonder how high a tree those machines of Mr. Willards will cover.

Mr. Willard: These machines have to be specially constructed. However, the tank is made of a special material which prevents erosion. I think we have paid something like nine or ten thousand dollars for the seven outfits.

Mr. Johnson: Let's get back to the poison campaign for a moment.

So far as we are concerned, we do not like it. We do not like to interfere with the operations of the Federal men, but we have conclusive evidence that it is not the thing to do. We do not think very many of the poison campaigns are justified or effective. We think there is a lot of blarney to it. I hate to take issue with Prof. Severn or Mr. Knowles, but I want to know how we can control it. The grasshoppers like the young, tender sprouts of grass and weeds. I doubt very much if a grasshopper will desert that for sawdust and molasses, but nevertheless we cannot go out and interfere with the program when it seems to have the support of the general public.

You know a man will grasp at a straw when he is in distress. Possibly this is the solution. And so ti is with the campaign for the shelter belts. I think we must find out how we can protect these trees without resorting to poison. I think it can be done. I believe this group can find the answer.

People would like to go out and take rabbits for food purposes. We started a poison campaign against rabbits last fall. It was started just about the time the bird migration was on. Personally I thought it was a bonehead thing to do when we started it. Now then, the question is should it have been started when it was so dangerous. The people found out about the campaign and stopped hunting rabbits. It was no wonder that we found ourselves facing a lot of criticism.

These people who often laid in a large supply of food for the winter, were afraid to eat rabbits. I don't blame them. If we have to resort to a poison program, I think it should be handled by experts and with less danger to the general public.

We agree with Mr. Willard that it is unfortunate that all of the fine work done by the Biological Survey is largely neutralized by the poison campaign. I think that the poison campaign is wished on the Biological Survey.

I am not as radical on this subject as Mrs. Edge of New York. We do not feel as strongly about it as she does, but we are going to have our hands full with it before we are through. I believe that this is a program that is unjustified, unnecessary, and filled with dynamite.

We can cite definite conclusions. But we do not want to take advantage of our position in this matter. We have information at our command and in our possession based on our investigations and as the results of laboratory analysis. We cannot understand why the campaign is necessary.

I am going to turn the meeting over to Mr. O'Connell, and ask him to present the next speaker.

Mr. O'Connell: The next paper is to be presented by Mr. Blizzard of Iowa and is on the subject, ' Relative Merits of the Lonergan Bill S-13, and the Barkley Bill S-702.

Mr. Blizzard: Mr. Chairman and Ladies and Gentlemen of the Association of Midwest Fish and Game Commissioners:

The subject assigned this speaker, "Relative Merits of the Lonergan Bill S-13 and the Barkley Bill S-702, Stream Pollution Bills Pending in Congress" is rather difficult to discuss because most of it will be rather dry to those who have to listen.

Let me say in advance that both of these Bills were introduced in the Senate of the United States and in order to properly discuss them, it will be necessary in laying the foundation, to briefly describe each Bill.

The Bill introduced by Mr. Lonergan provides:

Section 1. The National Resources Committee shall be made a permanent establishment of the United States and that this Committee shall be composed of the Secretary of the Interior, the Secretary of War, the Secretary of the Treasury, the Secretary of Labor, the Secretary of Commerce, The Federal Emergency Relief Administrator, and these members shall serve without additional compensation. In addition, the President, shall receive a salary of $10,000.00 a year and the President shall designate one of the members as chairman of the Committee.

SECTION 3 (a) It is the duty of this Committte to cooperate with the agencies of the several States.

(1) To deal with water pollution, looking towards its prevention and abatement;

(2) To encourage uniform state laws relative to water pollution;

(3) To encourage compacts between States for the

prevention and abatement of water polution.
(4) to make studies and surveys and experiments for the purpose of preventative and corrective measures relating to water pollution.
(b) (1) To collect and disseminate information:
(2) To make available to State agencies the results of surveys, studies and experiments;
(3) To advise and assist State agencies without charge to such State agencies;
(4) To make or arrange grants and loans for the construction of sewage disposal plants, as hereinafter provided.

SECTION 6. (a) To classify navigable waters in the United States into districts to be known as sanitary water districts.
(b) To fix standards of purity in each district for navigable waters.

SECTION 7. (a) To set up district sanitary boards to govern and control sanitary districts;
(b) (3) To institute proceedings for the prevention and abatement of water pollution in such districts;

SECTION 8. To make loans or grants or both to States and districts and municipalities, and to make loans only to persons or corporations for the construction or improvement of sewage disposal plants.

(2) Provided that no grant on any project shall exceed 50% of the cost of such project;

SECTION 9. To bring an action in Court to prevent or abate any such nuisance which impairs the waters for navigation purposes.

SECTION 11. There is appropriated such sums of money as may be necessary to carry out the provisions and purposes of this act.

The Bill introduced by Mr. Barkley in the Senate provides for:
SECTION 1. A division of water pollution control within the United States Public Health Service, and the Surgeon General of the Public Health Service is commissioned to appoint a Director who shall carry the rank of an Assistant Surgeon General of the Public Health Service.

SECTION 2. (a) This Division of the public Health Service is authorized to cooperate with the States, municipalities and industries in eliminating or reducing pollution of the navigable waters and tributaries of the United States. This Division is authorized to make joint investigations with a State or States of the condition of any waters in the United States, either navigable or otherwise.
(b) It shall encourage the cooperative activities by the several States looking towards the prevention and abatement of water pollution. It shall make available and disseminate information to State agencies, municipalities, industries and individuals.

SECTION 3. It shall, upon the request of any State health authority and subject to the approval of the Surgeon General. conduct surveys and make recommendations for the correction and elimination of conditions found to exist.

SECTION 4. It shall publish and prepare from time to time, reports of these investigations and recommendations.

SECTION 5. It shall declare eligible any State, municipality, or other public body to receive loans and grants upon such terms and conditions as the Secretary of the Treasury, with the approval of the President, may subscribe, provided;

(1) That loans or gants in aid shall not exceed 331/3 per centum of the project.

SECTION 6. It may declare eligible any person or corporation to receive a loan under the same provisions that public bodies may receive a grant.

SECTION 7. (a) There is set up in this Division, a board of five commissioned engineer officers of the Public Health Service, a majority of whom must be experienced sanitary engineers.
(b) This board shall submit to the Surgeon General recommendations as to all projects for which grants and aid or loans have been applied for;
(c) The records of these projects, estimates of costs, grants or loans in aid, shall be printed by the public printer on or before the 3rd day of January each year for the use of Congress.

SECTION 8. There is appropriated for the Division beginning the fiscal year ending June 30, 1938, the sum of $300,000.00 for the expense of administering the Division of Public Health Service.
SECTION 9. There is authorized under the same terms $700,000.00 to be paid to the different States for expenditures under the direction of the State Health authorities in promoting investigations, surveys and studies necessary in the prevention and control of water pollution.

The speaker sees very little difference in these two Bills except that the Lonergan Bill sets up an entirely new Commission or Bureau to handle the work of water pollution, while the Barkley Bill creates a Civision in the National Department of Public Health to handle this subject. They both propose cooperation between the Federal Government, States, districts, municipalities, and private individuals. They both provide for extensive surveys investigations and tests.

It would appear to the speaker that if a choice were to be made that the Barkley Bill, which places the jurisdiction under the United States Public Health Department, would be the better of the two because it is my belief that the Department of Public Health would have a better knowledge of the things that are necessary to eliminate water pollution than the National Resources Committee could possibly have. Then too, the Barkley Bill provides that the final decision in the

States rests with the State Board of Health, and in my judgment, that would be the best department in any state to judge the proper elimination of water pollution.

And so, looking at both Bills from every angle, I would give the opinion that the Barkley Bill would work to the best interest of the citizens of each State and the United States government.

May I now be permitted to discuss both Bills from the stand point that they affect water pollution? It is stated upon reliable authority that 45% of the cities in the United States which are located on streams and lakes are without sewage disposal plants and it is known fact that most of these cities pour their raw sewage into our lakes and streams. Now, I do not doubt that the great majority of these cities and towns would be more than pleased to establish proper sewage disposal plants if they could find a way to get the money to do the work.
We know that this problem has become so serious that it has been the cause of serious sickness in certain sections of the United States. I take it, the Midwest Fish and Game Commissioners Association is interested in the best method of abating this health menace.

But in making a study of both the Bills, I do not find anythingin either of them which provides that the actual work is to be commenced. Certain sums of money are set up to employ engineers, experts, statisticians, etc., to make a study and report on conditions. Then it would appear the battle will be on to get Congress to appropriate the necessary funds to actually eliminate water pollution.

I may say to you quite frankly that I want to scrutinize very carefully any law passed by the Federal government that seeks to abbrogate any rights my State may have, for when a Bill provides "That loans and grants in aid shall be made upon such terms and conditions as the Secretary of the Treasury shall make, with the approval of the President," we can see the power of the Federal government to dictate and control any and all of these projects.

Again I state both of these Bills simply set up the machinery to survey, supervise and perfect on paper only, the different projects but not one dollar is appropriated to actually stop or control the pollution of our streams and lakes, and it would seem to the speaker that surely we have enough information among the several states and the United States government to begin actual work as well as the study.

I thank you.

Logan Blizzard, Chairman
Iowa State Conservation Commission

I don't know whether they had an idea that I was in the War Department or a Sanitary Engineer when they asked me to discuss this subject. All I knew about it was what I read in the apers.

Look it up with our local Congressman. I asked him to furnish me copies of the bills, and they put my name on the Speaker's clerk list, so I received everything that was said about the bill and all other bills in Congress. Some of these speeches indicated that the speakers knew their business, and others just wanted to get something in the record. But as I see it the purpose of these two bills is exactly the same. The one bill will contribute up to 50 percent of the cost of a project - the other bill as high as 33-1/2 per cent. The Lonegran bill creates a new division which is made a part of the National Resources Committee, while the Barkley Bill puts the work under a Bureau already established.
Personally I think the State Board of Health is the best agency through which this work should be carried on.

Mr. Swift: Are these projects to be undertaken under either of these bills to be based solely upon the effect they have upon health, or will the navigability of a stream have anything to do with it.

Mr. Blizzard: The matter of stream pollution does not, I believe, confine itself to navigable waters, even though the bills mention navigable waters.
Mr. Swift: Don't you think that the State Conservation Commissions should enter into such a thing as this.
Mr. Blizzard: Absolutely. I think we ought to scrutinize such a proposition very carefully.

Mr. Swift: I am wondering just what such a project would do to some of our fish lakes. Now we have some lakes in Wisconsin which have paper mills along their banks. They discharge refuse into the lake. I don't know just how detrimental this isto the general health of the people but I do know that it is detrimental to fish life. If they are going to attack it from the matter of health, they would be disregarding something which is very important to our Conservation Department.

Mr. Blizzard: The general purpose of the bill is to eliminate the discharge of sewage into streams and lakes. We have this problem in Iowa. The legislature appropriated $125,000 for a complete sewage disposal system at Okoboji and Spirit Lakes, and eliminate its discharge into the lakes. Some of the communities have sewage disposal plants but they don't use them and by-pass it. The engineers say that the right method is to have a disposal plant at the point where the sewage comes out. In this way the accretment would go into the disposal plant.

The legislature appropriated $125,000 to match government funds so that we might go ahead and erect complete plants at the Lakes. They say you have to do it, but you can't go ahead and use one dime of the funds set up by the Federal Government until the Government approves the plans and specifications. When we called in our Engineering Department, they told us it would cost $5000 to $8000 to do this. Then we would

have to go out and get the rights of way - get franchises from the towns - and spend a lot of other money - and where are you going to get the money. We have to do this before we can touch any of the $125,000. I can tell you the conservation Department was on the spot. But we finally got it ironed out. But the problem is one which faces all of us. We want to control the discharge of sewage into navigable waters to keep them clear of pollution.

Mr. Swift: What is to be the definition of navigable streams? Is it going to be a matter for the government to decide.

Mr. Blizzard: I presume that the government engineers will have a lot to say about that but I am firmly of the opinion that the Conservation Departments should be consulted. I believe from what investigations I have made that when these bills were introduced into Congress that no thought was given to wild life whatsoever. But this thing seems to be a matter of paramount importance to me.

It doesn't seem to me to be sufficient that we just consider it in the light of putting in a sewage disposal plant to keep sewage from being discharged into the lakes. We know that where this is done in many of the lakes in Iowa the water is pure enough to drink but that some of the material discharged into the lake while it does not have any effect upon the human system, does prove to be very injurious to fish life. We know, too, that the tannic acid discharged into the lakes and streams from the pulp mills, while it is not detrimental to the general health does effect the fish.

I believe that we are entirely right in our contention that the Conservation Department should have an active part in any of the work done under these bills.

Personally I think that funds should be voted to do the work and let us get to work. We have enough information now to go ahead and do something./ We have our Commissission, our Bureaus, our inspectors, our engineers. I would like to see work started and not a lot of time wasted on surveys, and inspections.

Mr. O'Connell: Mr. Lynch does not seem to have appeared as yet so I am going to ask Mr. McFarlane to read Mr. Thompsons paper on Crow Control.

Mr. Chas. McFarlane: This paper is entitled 'Crow Control in Illinois' and was prepared by Mr. C. F. Thompson, Director of the Illinois Commission.

In the winter of 1933-34 our attention was called to the crow menace by complaints from fruit orchard operators in central and southern Illinois. They claimed millions of crows were roosting in their orchards and causing untold damage by infestation of orchard diseases; by eating the fruit buds of the trees and by breaking down small limbs and branches.

A detail from our field force mad e an immediate investigation to the complaints and found them to be well founded and the number of birds in the roosts not greatly magnified.

This investigation let to others and brought to the attention of our department the great necessity of "doing something about it," but "what to do?" We learned of the great depredations the crows made in all bird life-song, insectivorous and game - and we concluded that a widely organized campaign would be necessary. Other states had inaugurated some work in crow abatement but we wanted greater and faster results.

Our first methods were by the gun - just common old shot gun. The first night of our campaign four of our department men killed 4000 crows with guns alone, shooting 1000 shells. A good average. These crows were killed in a pear orchard near Flora, Illinois. This roost was shot four times within two weeks and a total of 10,000 crows were killed by this method.

Considering the great number of birds available, we felt that some method should be devised by which a greater kill might be obtained at a lesser cost. A couple of our field force me with fertile ideas, conceived the idea of bombing these birds on the roost at night, so some experimental work was done. The first bombs were made by using cardboard tubes, black powder and shot. They were not very effective. Then dynamite was suggested, and again card-board tubes two inches in diameter and twelve inches long were used, placing a stick of dynamite in the tube and surrounding it with No. 6 chilled shot. These bombs were wired to the branches of the trees during the daytime, wired to an electric detonator and exploded through an electric cap. These experiments were successful and killed large numbers of birds at each shooting. Further experiment developed a metal tube, dynamite and shot; also a cement bomb in which was imbedded shot and exploded by dynamite, and our latest development is a return to the card-board tube, dynamite and shot bomb, with the auxillary of short mortars (or cannon) placed at about a 30 degree vertical angle and about 25 yards from the hedges, or trees, in which the crows may be roosting, and which are fired immediately following the bomb explosion. The shot from the mortars rake the unharmed or wounded crows flying from the roost after the bomb explosion and are quite effective. These mortars are about 12 inches in length, made from steel shafting and bored to a depth of about 9 inches and 2¼ inch diameter, with an opening in the side of the mortar for the insertion of an electric detonating cap to ignite the charge of black powder and shot with which they are loaded.
For full detail of the bombs and mortars our Department will gladly supply full information upon request.

As many as 40,000 crows have been killed in one roost at one discharge. From 40 to 60 bombs were used and the roosing conditions very favorable.

During the winter of 1934-35 our own Department killed 182,300 crows, and 21,770 birds were accounted for by sportsmen's associations and our field men, with guns, making a total of 203,070 birds. In addition 288 nests were destroyed, 2967 eggs, 347 hawks and 3900 starling, besides other predators.

During the winter of 1935-36 a total of 122,416 crows were

accounted for, 218 nests and 2026 eggs.

During the winter just passed--1936--37--96,122 birds were killed and in a contest just closed and promoted by the department 14, 344 crows were reported to have been slain by the sportsmen. In fact, that many pairs of crow feet were returned to our Department for evidence. This is a total of 435,952 crows that our Department is directly responsible for, and we conservatively estimate that through individuals and organizations in the State that have not reported, 50% more crows have been accounted for, or a total of 650,000 crows in three years.

A goodly number of crows but still their ranks have not been noticeably decreased. If all our States would wage a systematic campaign against these birds, before many years we would bring them under control and increase our duck hatch appreciably.
It is my firm conviction that the crow takes more toll from potential duck life than all the hunters in the United States and Canada, so I beg of you all to take a deep interest in this very important factor of control of predators.

An interesting side-light to this crow control campaign was the experiment of educating the public to the fact that the crow was an edible bird and that his carcass should not be wasted, but used for food.

In 1936 at the Illinois State Fair we served several thousand crows in the way of small sandwiches. There was no deception practiced and the public took to them very nicely. In February 1937 at the Sportsmen's show in Chicago we served about 4000 in this manner, and in St. Louis, Missouri, in the month following we served 3000 at their Sportsmen's Show. The general reaction was good and continued educational efforts along this line will educate the public to the fact that they are edible, healthy, and savory food. Furthermore,, they are a fine bird to hunt. They are sagacious, tricky fliers, and a fine sporting proposition to shoot. Our sportsmen are missing some good fun when they pass "Jim Crow" up as a good target to practice upon.

I am happy to say our Canadian fellow sportsmen are doing their share in this necessary work. In many Provinces the school children are enlisted to hunt nests, young crows, and eggs. Prizes are given to stimulate their interest and in some places bounties are give. Our states should show equal interest and enterprise.

We have had some reports from Canada that a diminution of the crow population is noticeable. We hope the reports are true but be assured a most active campaign is necessary, and will be for a number of years to bring this predatory bird into control so that we may have a restoration of song, insectivorous and game birds and bring into balance once more, the bird life which nature intended.

Mr. Blizzard: Does anyone know what happens to the trees when this blasting work is done.

Mr. O'Connell: I don't think the explosions are concentrated enough to do any damage to the trees.
Mr. Blizzard: I wonder how many of the states represented here pay a bounty on crows:
Mr. McKenzie: We have a county bounty which the counties can pay if they want to. There is no state bounty. Some counties pay 25 cents, some pay a dime, but I don't believe that more than a dozen are paying this bounty.
Mr. Walters: We have an optional bounty in South Dakota, but at this time no counties in the state are paying a bounty. I know that McCook County has paid five cents for a time.
Mr. Rudrud: We have no state bounty in North Dakota but we do have an optional county bounty but I do know that none are paying it now.
Mr. Schwab: We have a state bounty passed by our last state legislature of ten cents a crow.
Mr. Johnson: I am sure that Illinois has no bounty.
Mr. O'Connell: We have an optional bounty, but I don't believe any of the counties are paying it. The bounty is ten cents a bird and sometimes there is a bounty for eggs.
Mr. Willard: We have an optional county bounty. Very few counties are paying it.
Mr. Rudrud: Do any of the states have a bounty on magpies.
Mr. O'Connell: In Nebraska the magpies are included in the bounty on crows and the payment is optional with the counties.
Mr. Rudrud: We have a state bounty on magpies but none on crows.

Mr. Sullivan: I believe that this conference could, with a lot of benefit to itself, take up this crow situation, and see if something could not be done to interest the Biological Survey to make some determined effort to rid this country of the crow. This shooting and dynamiting doesn't do very much good. It is not a question of killing a thousand or so. We have them by the hundred of thousands. In some parts of the country we have roosts which shelter literally thousands of these birds and shooting and dynamiting doesn't make a dent in them.
If we could interest the Federal Government in attacking this problem, it might be possible to introduce some disease which would kill them off by the hundred of thousand and in this way we might get some relief from this pest.

I had some correspondence with Washington and they don't seem to be very much interested. They tell you that the migrating crow is the one that does the damage. If you have a million of them migrating and a thousand remain over, that thousand will do plenty of damage. We have no way of knowing what percentage of these crows go up into the nesting places of the ducks and they are bound to do a lot of damage up there. Of course just one state can't make much of a dent in them. You might kill off ten or twenty thousand at a time but that doesn't make a dent in the total.

If we can take some united action and get the Federal Govern-

ment to interest itself and perhaps introduce some disease or gas or something else and kill them by the hundreds of thousands, we would be getting somewhere.

If they do as much damage in the North as they do here in our states, I know that any such campaign would have a marked effect upon increasing the duck population. I don't know of any other one thing which might be done which would have such a beneficial effect upon the duck population as the destruction of the crow, and if this association went on record as asking the Biological Survey to make an investigation and find some way of destroying them by the hundreds of thousands, it would be a most worthwhile thing.

I don't know how they could do it, perhaps, a disease, or some other way. But if we went on record as asking them to do it, it might wake them up. They seem absolutely listless about it now. I have had some correspondence with them. They seem to think that we over estimate the damage done by the migrating crow, but when we think that a lot of these crows go North to the duck hatcheries, we know that they are doing plenty of damage. If by passing a resolution which places us on record as favoring some action by the Federal Government, we can get a little pressure to bear, they might get somebody to work on this perplexing question. I don't believe our association is active enough in this matter of crow control. It seems to me it would be the best thing we could do for the ducks and would help more than any other one thing in increasing our duck population.

I think that a paper like that of Mr. Thompson's is a very good one. I believe a lot of credit should be given Mr. McFarlane for presenting it so clearly. We ought to do something along this line.

Mr. McFarlane: During the month of March I made a trip to Scotland, England and Ireland. I did not think that anywhere in the world could you find such a variety of bird life as there is to be found ther. I don't believe it could be duplicated. There is the carrion crow, the jack-daw, and many other of a similar nature. I saw innumerable numbers of golden plover. What I waw over there makes me doubt very seriously this contention about the damage the crow does. I certainly don't believe that he does enough damage to warrant dynamiting, throwing bombs, pineapples or what have you.

I went into one of the large markets in London and there I found mallard ducks on sale for 37 cents, many other types of game birds on sale at prices ridiculously low. Golden plovers by the dozen were for sale.

According to an old English tradition or adage, it was said to be a good thing for one to eat humble pie. It seems to me after reading this paper of Mr. Thompson's that we might be eating crwo pie.

I don't think this crow situation is anything to be perturbed about. I certainly don't thin that it is sportsmanlike to dy-

namite them, or kill them with pine apples or mass shooting. I would certainly be opposed to anything like that.

Mr. Blair: I have had experience with crows for the past thirty years. I have tried various ways to assist in the work of game conservation. I know that crows are not the only things that attack duck nests, and I have treated eggs with strychnine in order to catch some of these other destroyers, but I had an exhibition of the destructiveness of the crow just this spring because six crows destroyed 2000 mallard duck eggs over a comparatively short period of time. Those were migratory crows.

We had quite an argument at the American Game Producers Association meeting in New York City about crows. This has been a matterof moment with us for years. One of our big arguments had to do with the classification of the crows so as to determine the predatory species. Dr. Fisher was in attendance at the meeting but nothing was done about it.

The crow menace has been recognized as a real one since the early twenties. About the time the agitation was well under way a well know national tribune came out with a two page story about some prophet in the Bible, I believe his name was Elijah being fed by the crows or the ravens. I am no authority on the Bible but I do know something about crows and regardless of what the crows did in the Biblical times, they certainly should be destroyed now. Once you get out in the field and see just what damage he does, you will agree, I have told Mr. Spencer of certain discoveries I have made of the destructiveness of this pest. There is no question about it. The crow destroys the nest, and in one instance at my place six of them destroyed 2000 mallard eggs.

We are facing a rather perplexing problem. We all agree that there is a shortage of game. We have tried to adjust conditions to meet this decrease. We have cut down the bag limits and attempted in this way to increase the supply - but we also have an increase in the number of hunters. When we first began issuing hunting licenses in Wisconsin, there were less than 30,000 game hunters licenses. By 1935 this number had grown to 215,000. How are we going to supply the game for this increased number.

Personally I think that the destruction of the crow, would have much to do with an increased supply of ducks.

Mr. Mauthe: I am not a defendant of the crow, but our Research Division has been conducting some experiments along this line, and the one which was completed last year and the one the year before that, as to just what extent the crow does damage nesting birds, raises a question in my mind.

Last year one of our naturalists who was all equipped to make the investigation arrived at some facts which we might say does not bear out the general statement that the crow is a prime destroyer of nest. This investigation had 570 nests under

observation and the number of nests destroyed was 193. The predominating destroyer was the skunk. We found that 38 percent of the total number of nests destroyed were so destroyed by skunks, and only six percent by crows. So you can see that the crow is not the only predatory destroyer of duck nests.

Now these are facts - 38 percent destroyed by skunks, six per cent by crows. But I might add that this experiment was carried on in an area which was not heavily infested with crows. You might call it a semi-infested area. This year we are conducting experiments in a heavily infested area and the results of our experiment will be available in November.

Mr. McKenzie: I think it is too bad that Mr. Thompson is not here to tell us about the work they have been doing in Illinois. Personally I believe that these bombs he speaks about are the proper thing to kill the crows. Those of you who have seen the hedgerow fences in southern Illinois will agree with me that it would be a difficult matter to kill the crows in any other way. These hedgerows are literally alive with crows at roosing time.

If this method of destruction that Dr. Thompson describes has resulted in the killing of 603,000 crows, they certainly have made a dent in the crow population even if there are millions of them left. I think the same situation prevails in Illinois as it does in other of our middle western states, where the forestration is not so heavy. In Oklahoma they carried on a state wide campaign to reduce the number of crows and it was given wide publicity. Dynamiting and organized hunts can be used successfully in some of these states. In Wisconsin, Minnesota and Michigan, you wouldn't use it successfuly because of the greater forest area.

As I said before, Dr. Thompson's paper is one which should be of very great interest to everybody here. He has put on an extensive campaign to eliminate this bird, and I am sure the methods which he employs have proven quite worthwhile. I believe if Mr. McFarlane went down to Illinois and saw just how it was done, and found out just why Mr. Thompson feels it should be done, he would agree that it was the proper thing and perhaps the best way to establish crow control.

Mr. Johnson: We have in our state a pretty well defined crow control campaign. We do know that the crow must be controlled. Our policy has been to purchase ammunition and supply it to the game wardens and then conduct organized crow hunts in well organized districts by townships and have some responsible person in charge of the hunt for which we supply the ammunition. We try to control the time for these hunts and usually carry them on after nesting time.

We believe if we make it too tough on the crow here before nesting time, we will drive them up north into Canada and the more concentrated nesting places of the ducks, and thus defeat the very purpose for which the campaign of control is conducted.

We allow the crows to get settled and start in housekeeping and in the meantime we have kept a fairly accurate check of the roosting places or nesting places. After they have become well settled, we move in on them and get our campaign under way. We get together a group of sportsmen, supply them with ammunition. Our game wardens are excellent crow callers, and if you want a demonstration of how the crows will answer a call, I am pretty sure I can arrange it. We move into their roosting and nesting places and accomplish two things, we get the crows and we get their nests.

It probably does not seem sportsmanlike to conduct these organized hunts, but the results obtained warrant the methods used. We save our pheasants and we save our ducks. We are selfish about it for the first and foremost idea in our mind is to protect the game in South Dakota. We are not driving the crows to North Dakota or Canada so long as we follow this method.

We are interesting our South Dakota sportsmen in this crow control campaign and when the birds concentrate in any one district, these sportsmen get busy. We try to have an organized hunt in every county. These figures may give you some idea of the results obtained. In one case we had a report of a small group of sportsmen cleaning out rookery in four nights of shooting. They killed more than 3000 crows with less than a case of shells. However, you might term it not sportsmanlike because it is night shooting. The shooters get in under these ash groves and get in blinds, and wait for night to fall. When it gets dark, they begin to shoot. The crows become bewildered, they will fly up in the air a little way and settle back down again. The final result of this hunt was a total of approximately three crows to each shell fired.

Now this work is done without very much cost to the state. All we have to do is create interest in the crow control program and the hunters to the rest. We do know that we have twenty percent less this year than we did last year. Just what the reason is I do Hot know. Perhaps it is because they are scattered over a wider territory this year because of the improved conditions generally.

Mr. McFarlane: There is one thing that I am unable to figure out from these discussions. I have heard about the crows destroying nests, and here are six crows getting rid of 2000 mallard eggs in a short period of some two weeks. I wonder just what the crows capacity for courmandizing is. Just what is his capacity.

Mr. Blair: I'll tell you what their capacity is. You follow my footsteps for six weeks in the spring and you will see what it is. I tell you gentlemen we have to do something to iron this out. We must conserve our game so that we can have a heavy increase.

I believe you will all remember how back in the early twenties

somebody got the idea that the skunk was a valuable animal and should be protected. I believe the same idea occurred in other states too. It led to quite a discussion. Those of us who knew what the skunk did, could not quite agree on the protective idea. However someone prevailed upon the state legislature to permit the trapping of skunks, and so the skunk was made an object of trapping from November 15, to March 15, beginning in 1933. Now whoever wrote the law forgot the fact that the skunk hibernates in the winter so the result of establishing the open season during the winter months as they did, really resulted in a closed season for four years. You know the answer to that one.

But I believe this crow situation is one that faces practically every state represented her, and it is one which we should do something about.

Mr. Rudrud: To bear out what Mr. Mauthe said, I decided to construct a crow trap, and in order to get results, I planned to bait the location of the trap. I went down to a hatchery and got two cases of eggs and baited the ground before I started construction of the trap. And I never did have a chance to construct it because the skunks and the raccoons got the two cases of eggs before the crows did. I placed them there for the crows with the idea of getting the crows into a trap. Instead the skunks and the raccoons got the bait.

Mr. Adams: I should like to report that one of our wardens told me that under one crows nest he found the shells of 26 pheasant and duck eggs which the parents had apparently brought to the nest to feed the young. We can safely assume that the parent birds destroyed a lot of eggs that they didn't bring in to the nest.

Mr. O'Connell: I believe it is customary in a discussion of this kind to refer it to a resolution committee and since our Resolution Committee is still functioning, I should like to suggest that they discuss it and perhaps they can bring in a recommendation for us. In connection with their deliberations it might bewell for me to suggest that they fortify themselves with some Old Crow.

Mr. Johnson: I think that this about covers our morning program and we will adjoun until after lunch. Please be prompt in returning to the afternoon session as we have a busy afternoon ahead of us.

Saturday Afternoon

Mr. Johnson: The president of the Sioux Falls Izzak Walton League would like to make an announcement relative to the party for tonight.

> Announcement of entertainment and dinner at League Club Rooms and Grounds.

There will in all probability be from 150 to 200 local sportsmen out there and so it will not be necessary to do a lot

of introducing, I am going to distribute these cards which bear your names and will ask you to pin them on your coats. We hope to make this a successful party.

Mr. Orfield of Minnesota, Ass't Attorney General, just drove in. He was to be first up this afternoon but he asked whether he might have time to brush up a little and get his lunch so I am going to reverse the program again. I have asked Mr. Conway to start the program, and following that, we will have Mr. McCutcheon of the Forest Service, and then two papers by members of the legal fraternity. I want them both here as there may be some legal questions involved and we would like to have them answer these questions. Also sometime this afternoon Mr. Speaker of Iowa is going to present a paper on the subject, Pond Rearing of Wall Eye Pike. However, without further ado I shall ask Mr. Conway to take the floor.

Mr. Conway: Talk before the Association of Midwest Fish and Game Commissioners Sioux Falls, South Dakota, June 12, 1937 While the title "Farmer-Sportsmen Relations" includes both the hunter and the fisherman, it is my intention to confine my statements to the hunter as I believe that most people automatically think of him when this topic is discussed. Moreover, the problems existing between the landowner and the gunner a re practically the same as those involving the angler. Many of my remarks will deal primarily with pheasants, but they are, nevertheless, applicable to other species as well.

Wisconsin's farmer-sportsmen problems increased considerably with the inauguration of its game division in 1928, or at least, they were more in evidence with the advent of a definite division concerned with sudh problems.

The first major obstacle encountered was the scarcity of native game, especially upland game birds, in the agricultural sections of the state. The manner in which the pheasant had adapted itself in other states where similar donditions existed convinced us that upland game bird hunting which had become almost a thing of the past with the depletion of the prairie chicken, ruffed grouse, and quail population could be revived with the introduction of the pheasant on a large scale. As a consequence, in 1929, our first state game farm was established primarily for the propagation of pheasants and the distribution of their eggs. Previous to that time scattered stockings had been made through the efforst of interested individuals and organizations, but no widespread interest was manifested. However, when there was made available to the paople of the state, within a single year, approximately 10,000 mature birds and 100,000 eggs, you can rest assured that not only the sportsman but the farmers who were thereby enabled to re-stock their lands evidenced incredible enthusiasm. Whereas, in the past, it was possible to do little other than talk about the shortage of game, they could now take an active part in the restoration program by jointly rearing and stocking pheasants. Mutual rearing problems encountered and a common interest in the welfare of the birds accomplished more than any other one thing toward bringing the farmers and sportsmen in closer contact and cooperation.

While some illegal killing undoubtedly took place, you can be reasonably sure that any person who has taken the trouble to rear birds will go out of his way to make certain that others respect the laws protecting "his birds".

We have a well developed laboratory on the farm where pathologists are employed to study disease problems, both in connection with the fur bearers, as well as game birds and game animals. The services of these men are provided free of charge to any private fur rancher who requires them.

Many specimens of birds and animals are shipped to these laboratories throughout the year for posting and after examination, the shipper is provided with full information relative to the cause of the animals' death.

Although this farm is little more than two years old, our pathologists have posted more than ten thousand cases, some of the animals even coming from states as far away as California.

You can appreciate that under these conditions the farm is producing something for the sportsmen, the commercial game breeders, the commercial fur breeders, and is also definitely of great educational value to the public at large. As many as 1,500 people visit this farm in a single day, particularly on Sunday, and every day in the week groups from this and other states are examining the farm.

While an egg distribution program has always been the subject of considerable controversy, we have maintained that notwithstanding its drawbacks, it has been a decided asset to our propagation program.

With the development, at the state experimental game and fur farm, of an efficient and practical system of electric incubation and brooding, the egg distribution plan is being gradually replaced by a program wherein 50,000 day-old pheasant chicks and from 40,000 to 50,000 half grown pheasants are being distributed throughout our pheasant counties. We are convinced that such a program will result in the maturing of a greater percentage of mature birds than was possible under the system wherein only eggs were distributed.

Having reared and stocked birds, cooperators naturally set about assuring their survival and lent their united efforts to an organized winter feeding program. Previous to this time, feeding was carried on almost entirely by the farmer who undoubtedly received little thanks for his efforts, but with the participation of the sportsman in the propagation program, winter feeding became his problem as well. As a consequence, the sportsman began to appreciate the part taken by the farmer and to assume a share of his burden. This cooperation also resulted in a better feeling on the part of the farmer toward the sportsman.

Their activities in winter feeding are correlated, at the present time, by the conservation department through its field

men who supervise the annual expenditure of $7,000 of the game division's fund which is greatly augmented by donations for the purchase of grain to be distributed to those active in the feeding program.

While on the subject of winter feeding, it might interest you to know what Wisconsin, in cooperation with ECW, has started a foodbearing nursery. The distribution of the stock produced will eventually reduce the cost of winter feeding, improve cover conditions to a great extent, and, what is equally important, interest the farmer from the standpoint of erosion control, windbreaks, beautification of the farmstead, etc.

You are probably aware that the legislature of 1933 granted authority to the conservation commission to establish all regulations pertaining to the taking of fish and game. With the desire to exercise this authority as judiciously as possible and to establish sound and reasonable regulations and as the same time provide the general public with the opportunity of having something to say in the matter, the conservation commission promptly inaugurated a system whereby sportsmen and other interested parties of the several counties of the state elect each year what are known as county game and fish committees, consisting of three regular members and two alternates.

These committees in all instances are non-political and are elected for the purpose of recommending, with the aid and assistance of state conservation wardens and forest rangers, regulations for the taking of fish and game which they feel will be beneficial to their locality as well as the state as a whole. County meetings are first held in which all the public of each county has an opportunity to participate and some few weeks later a general state meeting occurs at Madison at which all the committeemen elected by the county, and the conservation wardens, make their final recommendation for fish and game regulations for the coming year, for the state as a whole.

The commission, however, at all times reserves for itself the final decision, regardless of what the vote may be, as there are occasions when this is necessary, both from and emergency standpoint and also where the best of judgment may not be used by the participating committeemen.

The farmer-sportsmen relationship problem which seems to be of greatest interest to many of us at the present time is "Can free public shooting be continued?"

Some contend that it is doomed, that the solution lied in fee shooting either on lands managed by farmers or on licensed shooting preserves. Other take the opposite stand and have already demonstrated that free shooting can be carried on. This has been accomplished in some states by purchasing land outright, by leasing the shooting rights at a fixed price per acre, or by securing them free through a cooperative agreement

with the farmers or landowners.

Wisconsin enacted a shooting preserve law in 1931. While such a law is not the only type of legislation which might be passed to give fee shooting a trial, I am of the opinion that it has thrown considerable light on the subject.

Our law permits the taking, by shooting only, of 75% of the pheasants liberated at the expense of the licensee; and the preserve season, instead of being limited to the regular 6 day open season for pheasants, extends for three and one-half months. Such a set-up provides the commercial game breeder with an additional outlet for his product, gives the landowner some remuneration, and increases the pheasant population in the surrounding territory since many of the birds stocked on a preserve wander away.

One of the bad features of such a set-up isthat there is a decided tendency to lease land which has been open to the public in the past and stocked at its expense. This creates a great deal of misunderstanding and ill feeling not only between the preserve operators, but also between those opposed to fee shooting and the conservation department.

The point that particularly interests me is that it is apparently impossible to take, by shooting, enough of the 75% permitted by law to enable preserve operators to charge a fee low enough to allow the ordinary sportsman to indulge in this form of shooting on commercially operated areas. Statistics show that the average Wisconsin shooting preserve takes only 35% of all birds liberated despite the fact that the shooting of hens is permitted and is carried on to quite some extent. The 35% taken does not include cripples or birds shot and not found.

Undoubtedly the contention of some that more preserves and more liberal regulations which would enable operators to take more of the wild-hatched pheasants whould materially change the picture is all very true, but at the present time the extensive licensing of such areas greatly reduces the proportion of pheasant and rabbit country open the the general public.

As yet, Wisconsin has no serious problem in providing territory for hunting prairie chicken, ruffed grouse, and dee, since there are approximately three million acres of what may justly be termed public hunting grounds which provide excellent sport for those who enjoy hunting the species mentioned.

Licensed shooting preserves have a place in our game set-up, but they alone are not the answer to the problem of the continuance of public hunting.

A certain state has a system in operation at the present time which is attracting considerable attention. Under their plan, state owned or leased refuges set up within a township with a shytem of controlled hunting on the balance of the land is administered by a township association. Landowners, tenants, and their children hunt on their own land without cost or elsewhere in the township on a 25¢

permit. Township residents not owning land may hunt by paying a 50¢ fee. Non-residents are charged a fee ranging from $2.00 to $3.50. The number of outside permits issued varies with the amount of game on the area.

The revenue derived is expended for posting, patrolling the area, developing the refuges, and carrying out other management projects. In addition, one or two social functions are held for the members of the association, and the balance of the income is divided between the township school, church, and landowners.

While this system undoubtedly would work out satisfactorily on the best pheasant country in any state, it is doubtful whether the income on average to poor pheasant territory would provide sufficient funds to carry on the necessary management and create enough incentive for the landowners to lend their whole-hearted cooperation.

Other states in this section of the country have various management plans under which hunting is controlled by limiting the number of gunners on an area. However, fees are not charged in most instances. Several Eastern States have farmer-sportsmen cooperative management plans under which the landowner may control the number of hunters admitted to his property, and no fee is charged.

It is frequently stated that it is possible for a state to purchase marsh or other cheap land in agricultural communities, thereby making a public shooting ground system not only possible but practical.

It is true that a <u>limited</u> amount of such land might be acquired, but I am of the opinion that land values would prohibit any state from securing sufficient land of this type. Even though this were possible, such land would provide control of only the <u>wintering</u> grounds of the pheasants and undoubtedly not the greater percent of those.

To be practical, any public shooting ground system should be operated in such a manner that the necessary management can be practiced on the greater portion of the range.

Pennsylvania has long been noted for its system of refuges and public hunting grounds. In 1927 the legislature increased the hunting license seventy-five cents with the stipulation that the additional revenue was to be used for refuges and public hunting grounds. Today they have an annual income of about $400,000 for this purpose.

Despite the fact that they have a fund that certainly is much larger than any midwestern state could hope to have for this purpose for years to come, Pennsylvania has found it necessary to adopt a program that may be termed a farmer-sportsman cooperative.

States, who cooperative public hunting grounds systems offer

the landowner little or no direct compensation for the use of his land, base the success of their plan on the fact that most farmers are not interested in receiving cash from the hunter, but they are primarily concerned with the trespass problem. The y wish to have some control over those roaming their fields and in the event damage is done be able to fix the responsibility.

There is no question as to the right of a landowner to post his farm without entering into a cooperative agreement with a state game department, but it is common knowledge that many persons pay little or no attention to "No Trespass" signs, and that it is too much trouble or too difficult to obtain a conviction for trespass for the average farmer to do anything but order people off his property.

It is, however, decidedly to his advantage to enter into an agreement with the game department of his state whereby the area surrounding his buildings is posted with state signs as refuge and the remainder of the farm marked with state signs which permit the general public to hunt but with the knowledge that the rules and regulations governing such cooperatives are to be strictly obeyed.

I firmly believe that the average farmer is willing to permit the average sportsman to hunt on his land. I do not class the person who breaks down fences, lets down bars or opens gates and fails to close them as an average sportsman; in fact, I do not even call him a sportsman. The few who run wild have caused considerable trouble in the past and no small amount of damage, and all of us must suffer more or less as a result. The farmer naturally suffers most as he is the victim of the careless and irresponsible person who roams the fields during open seasons.

The day when one can merely pick up his gun and kill game as he chooses is gone forever. We must all take an active part in conservation activities if we wish to have hunting go on indefinitely.

We can spend thousands of dollars yearly for propagation, winter feeding, law enforcement and research; but unless we have the proper farmer-sportsman relationship, public hunting is doomed.

Orders are then drawn dealing with the regulations, which must receive the approval of the governor, and be published in state papers in much the same manner as are acts of the legislature. Such a system has weaknesses to be sure, but it increases sportsman's priviledge, keeps our administration and field force on its toes and makes the public see the warden as a different man.

Mr. Johnson: What do you figure as the cost of the day old chick to the department when it is delivered to the farmer.

Mr. Conway: The cost of the egg and the production between ten and fifteen cents, and about three or four cents more for gett-

erer too high, and it cannot be readily shown in court that we should be given the right ot obtain this land under the law of public domain as a public necessity. And certainly the department cannot buy 1 and a $50.00 an acre to provide public hunting grounds.

We had one case of this where we attenpted to get some land in White Water Valley. The sportsmen had promised to help us and when we went down there and undertook condemnation proceedings, the sportsmen fell down on us and it was a difficult thing for us to show any good reason for the condemnation proceedings.

We will never have enough money to buy public hunting grounds at prices so high. We get something like $250,000 a year into this fund for the acquisition of hunting areas and now we only have one in southeastern Minnesota. We will never have enough money to buy satisfactory acreages in Minnesota to provide such hunting grounds. It is almost impossible. We cannot hope to buy little acreages here and there. Eventually we will have to do something to provide the sportsmen with shooting grounds and last year we investigated the plan followed by Iowa.

In certain quarters it is felt that the license should be increased from $1.00 to $2.00. It is suggested that 75 cents of this money go into the fish and game funds and $1.25 of it go to the public hunting ground funds. It was suggested that the hunters should pay a certain fee to the state per head of pheasants taken, say ten, fifteen or twenty five cents. Then the state would pay each farmer a certain amount each year depending upon the number of birds harvested from his land.

Personally I don't think that a state should do any such thing. If a man wants to find himself a good place to hunt and is successful, he should be willing to pay the farmer for the privilege. If the farmer is willing to let the hunters in on his land, I believe it is entirely proper that he should be paid for it, but should he be paid by the state or by the hunter himself.

We made a survey of the various plans used by the different states and while we have not taken any definite action, it seems to us that the plan of Iowa is the better one. It seems to me that as the state becomes more densely populated and the state continues to sell more hunting licenses, eventually some sort of farmer-sportsman cooperative plan must be evolved because we will never have enough public hunting grounds to go around, and some decision must be made as to whether the state or the hunter should pay the farmer.

Mr. McKenzie: Do you have $250,000 a year to buy these game refuges or hunting grounds.

Mr. McFarlane: Yes. But our difficulty is that the desirable shooting ground, especially so far as pheasants are concerned is first class agricultural ground, and we would have to pay a high price for it. It is worth more than that from an agricultural standpoint. If we go in and try to get it through condemnation proceedings we run into trouble.

ing it out to the farmer safely;

Mr. Johnson: You made reference to some state which is so organized that township residents pay 25 or 50 cents for the hunting privileges. Is that for the season.
Mr. Conway: Yes, that is for the season,

Mr. Hutton: In connection with these county game committees. Is it not true that you have these committtees meet annually. I understand your commission was given the power to regulate the conservation of game in any way that it is wished. Your commissionss powers are very broad.
Mr. Conway: Yes - we do have rather broad powers.
Mr. Spencer: Do you have any great trouble in making these various adjustments at the annual meetings.

Mr. McKenzie: No, so far matters have run off very smoothly. I would like to mention this. We are interested in producing revenue for the Fish and Game Department. The legislature this year put through a bill permitting the issuance of a sportsmen license. Those who purchase these licenses can hunt, fish and trap. Three dollars of the fee goes into the Conservation fund, and $2.00 goes into the general hunting and fishing department fund and can only be expended to acquire by lease or purchase or rent, additional public hunting grounds.

Another thing which is very important to us in Wisconsin is the acquisition of the headwaters of the most important streams. We have great natural springs at the heads of these rivers. Some of these springs cover ten acres - some are smaller and some larger, but in the past they have almost all of them been under private control.

The lumbermen have cut the forests down to the stream edge and this naturally has had some detrimental effect along those streams which are the spawning grounds of our fish. It is our thought to acquire this land, and do some work there to protect the spawning beds of the trout and other fish. We hope to acquire this cut down land, reforest it and bring it back to its natural condition.

Mr. Mauthe: Isn't there some law in Wisconsin which provides that when this forest land is cut or cleared that it automatically becomes a public hunting ground. I believe that this adds materially to the area known as general hunting land.

Mr. McFarlane: Minnesota is particularly interested in this question of public hunting grounds, but then we have a different situation to meet. What pheasant we do have are to be found in a highly agricultural section. We too have a provision that funds from our hunting licenses go into a fund for the acquisition of public hunting grounds but our difficulty is that especially in Southern Minnesota, we have to go into a highly desirable agricultural region to purchase land and the price is too high. It ranges from $50 to $75 an acre.

The effect is that the cost of acquiring such land is altoge-

Mr. McKenzie: Well, it seems to me that with $250,000 a year for this purpose you ought to be pretty well fortified with public hunting grounds.

Mr. Hutton: There seems to be some question as to whether the purchase of land at $50.00 an acre to raise pheasants and convert into public hunting grounds is a good investment. We have some very fine agricultural land in Iowa and it is all under intensive cultivation. But say we went in there and paid $50.00 an acre for it, arranged natural coverage, planted the right kind of grains, and feeds. It isn't just a one year or two year plan. Suppose it stretches over a period of 25, 50, even a hundred years. What is $50.00 an acre over such a period and so long as the sportsman pays the bill.

There are two ways to solve this problem. The one is to actually buy the land and control its operation yourself, and the other is to lease the land and pay the farmer on aten year, twenty year, or twenty five year plan. The farmer gets that much money off the land anyway, and it doesn't make any difference to him. If you do this, then you can go in and arrange for the feeding crops, your natural cover, and do what you want to make it a first class hunting ground.

That is the way we started out nursery work for feed for game. We arranged with the farmers to produce cover and food for the game, and it has worked out very well. The same thing applies to the fishing grounds. I believe it is essential that the state take the lead in providing these places, and see to it that the game and fish are given every opportunity to increase and at the same time see to it that the sportsmen who pay the bill are given an opportunity to enjoy these things.

Mr. Johnson: We in this state are observing the xperiments carried on by our neighbors. We hoped we might have something to contribute to this discussion but as yet we have no definite conclusions. We have been authorized to acquire hunting grounds and fishing grounds but our program is rather limited. We cannot talk in figures of $250,000 a year. But we are working on our program and perhaps next year we will have something to report.

I am going to as Mr. A. A. McCutcheon of the National Forest service to tell us something about their work.

Mr. McCutcheon: The disucssions that have been carried on here today have been very interesting to me.

I have been connected with the Forest Service for several yrs and my remarks today will be confined to the work done in Region 2, which includes the area of Colorado, all of Wyoming, part of Montan, the Big Horn Region, South Dakota and Western Nebraska. So my talk will of necessity have to do with the national forests with which I am familiar.

Since the forest service has assumed no legal control over wild life and its management and control, a lot of people wonder why the Forest service is in ernest in this resource.

We recognize that this management and control is a function of the several states but we do have a very great interest in this matter.

The chief reason is that the national forest provide about 90% of the summer range for big game annually and about 40 percent of the winter range, with the exception of antelope. The big game species I refer to include deer, spike tail elk, mule deer, brown and grizzly bears, and in partnership with the state of South Dakota we own about 20 mountain goats.

In addition to providing both winter and summer range for this big game, the national forests furnish the habitat for the majority of our fur-bearing animals such as the beaver, the badger, the muskrat, martin, weasels, red and gray raccoon, ring tail cats, skunks, and some others including the wolverine.

Then in addition to these fur bearers we have a lot of predstors in the national forests including coyotes, bob-cats and cougars. And then too the national forests are the habitat of many varieties of upland game birds, many of which you do not have here in the middle western states, and of course it is the habitat of a limited amount of water fowl.

Now since the national forests furnish such a large amount of the range for the big game, and is the habitat of such alarge variety of wild life species, it is natural that the use of the national forest by this wild life must be and is correlated to the other uses of the national forest. The work of big game protection waterfowl protection, the use of the forest as a grazing domain, and for recreational purposes all must be considered.

Definite provisions must be and is made for wild life on the national forests. And any conflict between it and other uses must be adjusted.

The position of the forest rangers and their duties have to do with the management of the forest area and their work with wild life and big game is incidental to their regular activities which keep them well occupied. But in cases where violations of the law are flagrant or the rangers come on some one red-handed violating the law, our men will make the arrest and prosecute the case. They keep complete records on all cases reported to them and then wherever possible inform the local game wardens and in most cases our officers work in close cooperation with the local wardens.

The forest service role in the field of wild life is one of cooperation with the state and federal agencies charged with the actual administration of these resources.

During the past three years we have been doing alot of wild life survey work. We have had parties numbering from five to sixty men working in the field actually making surveys. I will discuss the wild life survey in a little more detail later on.

In addition to these functions already stated, the Forest Service constructs shelter places for various species of game in all of the forests. It is done not only for the benefit of the forests and our own service, but also as a service to the state, and in every case we furnish copies of the plans used to the state fish and game commissions.

Biennial reports are sent to the governors of every state and to the Fish and Game Commissions of the various states showing the game population, and the conditions surrounding the game. In these reports are also included suggestions for better management practices and needed legislative reforms.

The Forest Service has taken an active part in the extension and transplanting of various species of wild life. We have done this in cooperation with state conservation agencies, Chambers of Commerce, and other agencies who have been interested in this work.

We have about 17000 head of elk in Region 2. Most of them are the result of intensive protection and various transplantings made by the Forest Service. You all know how nearly the elk were exterminated in 1910. They had been practically exterminated in Colorado and the five forests there. But the few remaining were given absolute protection and the big herds we have now are the result.

In addition to the extension work done with elk, we have been transplanting mule deer, turkeys and beaver. During the past three years we have been doing most of our beaver transplanting in Colorado. We have 15 beaver traps which were used during the past year and have orders in for double that number. During the next few months we expect to transplant a hundred more.

Our forest service has worked in cooperation with the state agencies in the study of fish, and the stream and lake survey. We have also done a lot of work in the way of fish management and fish planting. The fish fry are furnished by the state hatcheries and by private hatcheries throughout the various states. Just to give you some idea of this work, the Forest Service planted between 18,000,000 and 19,000,000 trout in the Rocky Mountain region last year, and this number does not include the plantings made by the states, or other Federal Government agencies.

The Forest Service cooperates with other national agencies in every way possible. One group we do a lot of work with is the Biological Survey in Predator and Rodant Control work. We cooperate with the Bureau of Animal Husbandry in the study and control of wild life disease, and with the Bureau of Fisheries in stream and lake surveys, fish study and fish planting.

Since the introduction of the C.C.C. Camps in 1933, in ourregion alone we have constructed more than 300 ponds for fish. The sole purpose of these ponds is for the raising of fish to the proper size for planting and when they have reached this size, they are taken to the streams. The planting of frys and gingerlings is a pretty difficult proposition because

of the changes in temperature in the water and the swiftness of the mountain streams. The loss is often very high. The construction of these ponds adjacent to the streams has resulted in abig reduction in this loss. In some cases we have found the loss previously had been as high as 95%, so we believe that the construction of these ponds has resulted in the saving of several million of these fry and fingering fish.

About three hundred miles of stream improvement work has been done. It has been our experience in this region that so far as stream improvement is concerned, it should be confined to the smaller streams. The mountain streams are often subject to sudden rises and the current is very swift. We lost quite a few of our stream improvement projects on the larger streams because of these varying conditions so we have confined ourselves to the small streams. This stream improvement work consists largely of deflecting the streams wherever possible to avoid erosion, building small dams, and the erection of fish ponds.
In addition to this work we have constructed several reservoirs. These have been constructed in order to provide water for game and live stock. In addition these have also served as sanctuary for waterfowl.

Now, going back to the matter of wild life surveys, I would like to give you a general idea of how this is carried on.

The first thing we want to determine is the various wild life species and their distribution. The next thing is to determine the population, and third of course is to determine the location, extent and character of the ranges. We have had several surprises in connection with these surveys, and in many instances they have shown a far greater population than our previous estimates. For instance in one forest we had estimated the deer population was about 6000. The actual count disclosed 16,600 head, and we felt that our previous estimate had been conservative.

Our counts on elk and mountain sheep have not been carried through far enough as yet to know just how they compare with the estimates we have made.

In connection with the various surveys we have made of this game life we have studied the migratory habits, the routes taken, the dates on which the migration usually begins, and the character of the migration. We have found for instance that in some forests the game will migrate 90 to 100 miles between the summer and winter range, while in other cases the migration is not quite so long.

Detailed studies are made of the feeding habits and the food of this game. These studies are made by observation and by stomach analysis. Wherever it is possible we take the stomach and send it in to the Biological Survey or some state agency for analysis.

We have been collecting rather extensive data on the life history of various species, the increases, and the losses from various causes such as disease, predators, starvation, poachers, hunters, and natural causes.

That gives you a general idea of the work we are doing and for the rest of my discussion, I want to take up with you this regulation G-20-A which has caused some excitement. But if you have any questions before I launch into that, I shall be glad to answer them if I can.

Mr. Schwab: Have you developed any figures from your small game census.
Mr. McCutcheon: Not yet!
Mr. Schwab: Have you attempted to take a complete small game census.
Mr. McCutcheon: Not in the entire region. We have made game counts in various areas throughout the region. We have made counts which include every bit of life in the region. This is done by a strip count and field mice, small birds, every bit of bird and game life is counted. But with big game the count is made by mounted men who cover the territory where big game is found. But we do not have sufficient men to make an accurate count of the small game. It is an entirely different problem.

We have been interested chiefly in the big game up to this time although we do expect to do a lot of work with upland game in the near future.

Mr. McKenzie: Do you think that the methods of taking these counts have proven very accurate? Do you take a strip and count it and then make an approximation for the region?

Mr. McCutcheon: In our region it is my opinion that strip counts are not satisfactory. We have such a wide variety of elevations, water conditions, feeding ranges, and other factors entering into it. I do believe however they are a fairly good basis for estimating the number of game.

Mr. McKensie: You spoke of doing some lake and stream improvement work. Who was in charge of that work?
Mr. McCutcheon: We had the services of two experts from the Federal Government.
Mr. McKenzie: Where did the government get them. I don't think they have any, if the work the experts did in our state is any basis for judging. They cut down the bursh and forest right to the edge of the streams and lakes. They destroyed about all the natural cover the wild life had along these streams and lakes. One of these men had been working with the Bureau of Fisheries. I just wondered whether you got them in Washington and whether their work wasn't about the same type as we had wished on us.
Mr. Swift: How do you proceed with a big game gount?
Mr. McCutcheon: Our own men in the region local sportsmen and ranchers.
Mr. Johnson: I should like to suggest that we have some one present a paper at our meeting next year upon this subject of

making a game census. It seems to me the time is coming when this matter of a game census is going to be an important part of our work, and it would be opportune to have some discussion about it at our next meeting.

Mr. Schwab: We have been studying this problem for sometime in Iowa.

Mr. McCutcheon: There has been quite a bit of discussion about the order of the government known at G-20-A. I am going to read it and some other explanatory papers I have related to in it, and if there are any questions about it I will try to answer them.

The National Forests contain 162,009,145 acres of public land. They furnish the principal part of the range required by the big game animals of the West and a small part of the requirements for wild life in other regions. That all land should be devoted to its most productive use is a principle which has guided Forest Service policy for 29 years. This principle has been applied to range primarily adapted to wild life and land use plans developed accordingly. That its application has proved sound is indicated by the large increase in big game animals on the National Forests during the past 10-year period. That there is still room for mudh improvement is indicated by numerous areas supporting only a relatively small proportion of the wild life the areas are capable of supporting, and by the other large areas where the population of wild life is in excess of the carrying capacity of the land. To overcome these conditions the wild life crop must be coordinated with other essential uses and managed on a sustained production basis. To do that, regulations must be developed and applied which recognize the problems involved on each area or stream. With a view to the Federal Government contributing more largely and directly to such Regulation in specific cases involving lands in Government ownership which have not in the past contributed satisfactorily to the production of wild life, and in furtherance of cooperative efforts, the following Regulation has been promulgated:

WHEREAS, wild life is one of the major resources of the National Forest land and water, and its management and development are an essential part of the Administration of the National Forests; and

WHEREAS, the prevention of overgrazing and erosion and the protection watersheds, timber, and other resources are dependent upon the regulation of wild life population to the carrying capacity of the land or water, and such regulation is also essential to maintain the productivity of such land and water for wild life; and

WHEREAS, the regulation of wild life population by hunting and fishing is the most effective means of limiting the population to the carrying capacity of the range or water and of disposing of any excessive numbers; and

WHEREAS, plans for the development of the wild life resource,

including the regulation of hunting and fishing, should be closely harmonized with the plans and objectives for the management of other National Forest resources to insure the maximum public benefits:

NOW, THEREFORE, by virtue of the authority vested in the Secretary of Agriculture by the Act of June 4, 1897 (30 stat., 11), I, H.A. Wallace, Secretary of Agriculture, do hereby make and publish the following regulations for the occupancy, use, protection, and administration of the National Forests:

REG. G-20 A. When the Secretary shall determine upon consideration of data and recommendations of the Forester that the regulation or the prohibition for a specified period of hunting and fishing upon any of the purposes above set forth, he shall designate such National Forest or portion thereof, establish hunting and fishing seasons therefor, fix bag and creel limits, specify the sex of animals to be killed, fix the fees to be paid for permits, designate the authorized official to whom application for permit shall be made, and describe the terms and conditions under which hunting and fishing shall be conducted with a view of carrying out the purpose of this regulation. Public notice of such designation shall be given by such means as the Forester shall deem adequate for the purpose. Carcasses of animals or fish taken under permit shall be marked or tagged for identification as directed by the Forester.

REG. T-8½ Upon National Forest lands designated under Reg. G-20 A the following acts are prohibited:

Hunting, trapping, catching, disturbing, or killing any kind of game or non-game animal, or game or non-game bird, or taking the eggs of any such bird, except during hunting and fishing seasons established by the Secretary, and in accordance with the terms and conditions of a permit issued by a duly authorized officer which is valid and subsisting at the time.

IN WITNESS WHEREOF, I have hereunto set my hand this 29th day of March, 1934.

H. A. Wallace,
Secretary of Agriculture.

Forest Supervisors:
The following letter, signed by Secretary Wallace on March 9 and addressed to Hon. Franklin Girard, Secretary of State of Idaho, in response to Idaho Senate Joint Memorial No. 8 which requested the withdrawal of Regulation G-20A and T-8½ and the conditions under which they will be invoked:

"This will acknowledge receipt of your letter of February 11, enclosing certified copy of Senate Joint Memorial No. 8 with reference to Regulation G-20A.

"Regulation G-20A was designed primarily to meet those situations where, for whatever reason, failure to manage the wildlife resource properly has resulted in failure to secure adequate protection, development, and utilization of all other

national-forest resources. An awakened public interest in the development and use of natural resources demands that land under public ownership be made fully productive; that the past practice of defending unsatisfactory conditions by a denial of responsibility be replaced by a vigorous move, on the part of the Federal Government, to accept full responsibility for the protection, development, and correlated use of its own lands.

"One of the most important objectives of national-forest land management is to create and maintain a wild life population large enough to supply the greatest sustained production compatible with desired yields of other resources. This objective can be attained only where the responsible agency has sufficient authority and leeway to carry out whatever control measures may be necessary to secure the results desired. Continuity of planning and long-term management are desirable.

"Some states are now meeting the local situation in a very satisfactory manner, under state law and in cooperation with the Federal Government, and in such cases there is no need and no intention to apply Regulation G-20A. In other states, no action, or only unsatisfactory action, is being taken, and in these cases the Federal Government intends to take the initiative through application of Regulation G-20A. The Department feels that Federal action, where necessary in the interest of natural resources, is in no way inconsistent with the real objectives of state officials. On the other hand, Federal action through application of Regulation G-20A will, in many cases, provide the means whereby these objectives can be attained.

"An effort is being made to have an early clear-cut determination of the legal issues involved. In the meantime it is hoped that no misunderstandings will disrup cooperative relationships where satisfactory results are now being obtained.

Allen S. Peck, Regional Forester.

Modification of Regulation T-8½: By virtue of the authority vested in the Secretary of Agriculture by the Act of Congress of February 1, 1905, (33 Stat.,628), amendatory of the acts of June 4, 1897 (30 Stat. 11, 35), I , H. A. Wallace, Secretary of Agriculture, do hereby ammend Regulation T-8½ of the rules and regulations governing the occupancy, use, protection, and administration of the National Forests, to read as follows:

REG. T-8½. Upon National Forest lands designated under Red. G-20A the following acts are prohibited:

Hunting, fishing, trapping, catching, disturbing, or killing any kind of game, non-game, or fur bearing animals, game or non-game fish, or game or non-game birds, or taking the eggs of any such fish or bird, except during the hunting, trapping, and fishing seasons established by the Secretary, and in accordance with the terms and conditions of a permit issued by a duly authorized officer, which is valid and subsisting at the time.

Mr. Johnson: Has there ever been any indication that the Forest Service might be considering taking over control of wild life in any of the regions out here.

Mr. McCutcheon: No. We have nothing in this region which would make this seem advisable.

We have some problems to contend with which are perplexing. We have one state where a game refuge was started in 1923. There is a national forest in this area. The refuge was started in an area where wild life had a lot of natural protection, and plenty of feed for game. The deer and the elk have increased beyong any capacity of the winter range to provide food for them. Now these animals are dependent upon the public for feed.

The elk and deer have cleaned out 75 percent of the aspens, tamarack, shrubs, etc. The winter range for the game has been given over to other grazing and as a result these animals are going to die of starvation unless the government steps in and provides the nedessary food. We have attempted to suggest to various groups that certain lands be made into refuges and put under the jurisdiction of the fish and game commissions, but there are a lot politicians who don't want this done.

Mr. McKenzie: Has it ever veen determined who is in charge of wild life.

Mr. McCutcheon: The forest Service has no idea of assuming control of wild life resource where the states are doing it in a satisfactory manner. I might add that in connection with wild life surveys, we have invited the state fish and game departments to work with us and we have tried to work with them. We have sought information from them and they have often asked us for advice.

Mr. Blizzard: I don't know just what this order means to the rest of the men here but I do know this that if we want to keep the control of wild life resources within the bounds of our own state, we had better keep our eyes peeled. If we don't we will be out of a job.

Mr. Johnson: I am going to appoint a nominating committee. I think if the committee is appointed now that it will have time to get together and bring in a report tomorrow morning when we go into our executive business session. I would also suggest that the committee accept invitations for next year's convention. I shall appoint the following on the committee. Mr. MCKensie, Mr. McKay, Mr. Hutton, Mr. Lynch, Mr. McFarlane, Mr. Hulterstrom, and Mr. Sullivan.

I want to add too that South Dakota has published some simple instructions for the control of predators, and trapping methods and it has proven very useful. It might interest you and if so, we have copies of these pamphlets here and you can just help yourselves. The work has been compiled by expert trappers. It has to do chiefly with trapping for we are not much in favor of poison and we advise against the indiscriminate use of poison by inexperienced people.

Quite a few have expressed interest in our live beaver trapping campaign. Arrangements have been made to show a fifteen minute reel of this trapping operation. This reel shows the methods employed better than any talk could do it. It will be shown out at the Club House this evening.

We have two people present whom I want you to meet and who may have something to tell you. They are Mr. Dumont of the Sand Lake Refuge and Mr. Davison of the Soil Conservation Department.

We come to that portion of the program which has to do with the legality of some of our actions. We will have the pleasure first of listening to Mr. Orfield of Minnesota, discuss the law insofar as has to do with some of our operations, and the Federal Government.

Mr. Orfield: THE EXTENT OF FEDERAL JURISDICTION OVER WILD LIFE

Decade by decade as population has increased, it has encroached more and more upon areas which were formerly the habitat of wild life. The caribou has been crowded north in Canada; the buffalo can be found only in national parks; the flocks of ducks and geese have been growing smaller year by year. The threatened depletion of many valuable species of game has awakened the interest of the men and women interested in wild life and of the national government and the governments of the states. The result has been that the nation and the states have vied with one another in creating public parks, public forests and game sanctuaries of various kinds, each intended to promote the conservation of wild life. The renewed activity in this field on the part of both state and nation, particularly during past four years, makes it seem timely to consider the limits of federal and state control over wild life. My friend and classmate, Mr. Jones, is presenting to you the problem of state control, so I shall devote my time to the question of the limits of federal control.

In examining the extent of the jurisdiction of the federal government over wild life we are confronted at the outset with the fact that the extent of federal jurisdiction varies widely according to the area we are considering. There is, for instance, the question as to the extent of federal control over wild life in areas not within the limits of any state.

But we are especially interested in the extent of federal control over vold life within the states. Here again we are face to face with the fact that the extent of federal control depends upon the character of the area under consideration. The federal government owns forts and armories, arsenals and navy-yards, soldiers' homes, and military reservations, national parks and national forests, and also land held merely for sale and not devoted to any public purpose. In most cases these lands are within the limits of some state. The question then arises as to which authority, state or federal, may exercise jurisdiction over the wild life within these areas and, in case the jurisdiction is divided, what is the extent of the jurisdiction of each? The national government still owns large areas of land in many states. It is acquiring more. Is there a different degree of jurisdiction over public land

within a state used for a public purpose such as a national park, and land merely held for sale? We should also note that the extent of federal jurisdiction may be affected by the question whether, upon admission of a given state into the union, jurisdiction over certain land was reserved by the federal government and, if not then reserved, whether upon admission of a given state into the union, jurisdiction over certain land was reserved by the federal government and, if not then reserved, whether such jurisdiction was thereafter ceded by such state to the United States. Finally, there is the question as to the extent of jurisdiction of the nation over wild life in areas within the states which the federal government does not own.

What has been said has served to indicate that if we would determine the extent of jurisdiction of the federal government over wild life we must classify the lands of the United States and study the jurisdiction of the United States over the lands in each classification. It will be convenient to divide these lands into two main classes, lands located outside the limits of any state and lands located within the limits of the boundaries of a state.

Lands Situated Outside of the Boundaries of any State.

Lands situated outside of the boundaries of any state fall into two divisions, the District of Columbia and land within the territories. These lands are somewhat remote from the special interests of this group and may therefore be dismissed with a few words. It is sufficient to say that the federal constitution gives to Congress substantially absolute control over wild life within the District of Columbia and the territories. In the District and in the unorganized territories it exercises this control directly. In the organized territories it allows the territorial legislature to exercise such control as it sees fit.

Federal Lands Situated within the Boundaries of the States.

In determining the extent of control that may be exercised by the United States over lands within the boundaries of a state we turn first to federal constitution. Section 1 of Article 8 of that document provides:
"The Congress shall exercise like authority (that is, 'exclusive legislation') over all places purchased by the consent of the legislature of the state in which the same shall be for the erection of forts, magazines, arsenals, dockyards, and other needful public buildings."

From the foregoing it is clear that if land is purchased by the United States with the consent of the legislature of a state and is used for forts, magazines, arsenals, dockyards, and other needful public buildings the United States will have complete control over all matters within such areas, including wild life. There are very few cases in this field concerning wild life. But the degree of federal control has been fairly definitely established by cases involving other matters.

The Supreme Court of Massachusetts has held (Commonwealth) v. Cleary, 8 Mass. 76) that a court of that state cannot take cognizance of the alleged offense of selling liquor contrary, if such law were applicable, to state law, within lands in Massachusetts purchased with the consent of the state for arsenal grounds. In Mitchell v. Tibbits, 17 Pickering, 298, another Massachusetts case, it was held that a vessel carrying stone from Maine to the navy-yard at Charlestown, Massachusetts, was not engaged in transporting stone within the the state, when it reached such navy-yard, that the Charlestown navy-yard was outside of the jurisdiction of Massachusetts and that hterefore no offense was committed in disregarding the state's police regulations with refernce to vessels in the waters of Massachusetts. It follows that a state has no jurisdiction over the violation of a state game law on the grounds of a military reservation within a state purchased with the consent of the state.

However, the constitution provides definitely only for lands acquired for forts, magazines, arsenals, dockyards, and other needful public buildings. Of far more importance to this group is the question as to the extent of federal jurisdiction over wild life on lands acquired by the federal government with the consent of a state for purposes not definitely mentioned in the constitution, as, for example, for national parks, and national forests. Here, again, we find that there are very few cases affecting wild life, so we must again examine cases in other fields and draw our conclusions from these. The lands in Rocky Mountain National Park were acquired by the federal government with the consent of the state. Rules laid down by the federal government provided that no person should engage in business within the park without a permit. In the case of Robbins v. United States, 284 Fed. 39, it appears that Robbins engaged in the business of transporting passengers for hire within the park. He had no permit. Action was brought to enjoin him from operating without a permit. He contended that the highways within the park were under the exclusive jurisdiction of the state of Colorado, unaffected by the establishment of the park. But the federal district court held that the regulation of traffic on park highways are a valid exercise of control over federal property and that such control is sustained by the provision of Section 3 of Article 4 of the United States constitution authorizing the federal government to make all needful rules and regulations respecting its territory and other property. It is proper to raise the question whether precisely the same rule would apply to game in a park as to a park highway. The highway is an absolutely essential means of making a park available for use by the public. Wild life also is of great importance in making a park valuable, but perhaps not in quite the same degree as a highway.

In this connection the case of Yellowstone Transportation Company v. Gallantin, 31 Fed. (2d) 644, which was decided by the United States Circuit Court of Appeals, is the utmost importance. The question involved was whether the tax laws of the state were operative in Yellowstone Park. The State of Montana had ceded to the United States exclusive jurisdiction over all lands in the state within

Yellowstone National Park, reserving only the right to serve process. The court held that by virtue of such cession the state had no jurisdiction within the park except for the purpose reserved. The court considered the question whether the state had the power to cede jurisdiction over a portion of its area for a purpose other than the purposes set forth in the Consitution and held that the State of Montana possessed the power to make such a cession, saying:
"It was suggested that, if a statemmay make a cession of this kind, it may destroy its sovereignty by ceding exclusive jurisdiction to the United States over its entire territory, with the consent of the latter. Such a contingency is possible, but improbable and the situation must be met when it arises."

The court also held that a subsequent attempt by the state to nullify the cession of exclusive jurisdiction was ineffectual.

If this case is followed by the Supreme Court of the United States, it is clear that a state which cedes to the United States jurisdiction over the land within a national park or national forest thereby loses control over the wild life within such area. Accordingly, if a state wished to reserve control over the wild life within areas of this character, it must specifically reserve such power in making its cession of jurisdiction.
I consider next the question of the jurisdiction of the United States over wild life on lands acquired without the consent of the state in which such land is located. The case of Curry v. State, 12 S. W. (2d) 796, is here in point. Curry was charged with fishing within the limits of a federal military reservation. This was in violation of the laws of the State of Texas, if such laws were operative within the reservation lines. Jurisdiction over the reservation had never been acquired by the United States by cession or otherwise. Curry claimed that the laws of Texas were not in force within the reservation, But the Texas Court held that in view of the fact that there had been no cession of jurisdiction to the United States the game laws of Texas were operative. This decision, of course, does not imply that the federal government has no jurisdiction whatsoever with reference to game in an area where there has been no cession of jurisdiction. If game within such an area should commence to destroy federal property it is clear that the federal government might protect such property and if necessary destroy such game.

The correctness of this view is shown by the case of Hunt v. United States, 278 U. S. 96, in which it was held that when deer within a national forest increased in number to the point where they were injuring valuable trees, bushes, and forage plants they might be killed by federal authorities and their carcasses shipped outside of such national forest in apparent violation of state laws.

Summarizing this portion of this discussion we may say that over lands acquired by the United States for a public purpose but without the consent of the state and withour a cession of jurisdiction the federal government possesses such degree of control over wild life as may be necessary to protenct its property and make the lands useful for the purposes for which

they are held.

The next question that suggests itself is the extent of federal control over wild life in an area within a state owned by the federal government but not used for a federal public purpose, as, for example, land held merely for sale. In this connection I refer again to the case of Hunt v. United States, supra, in which it was held that the United States, might kill deer which were destroying timber in a federal forest. It is probable that it could take similar action even if such federal land were not within a national forest. The case of Camfield v. United States, 167 U. S. 518, 525, tends to support this conclusion.

In 1885 Congress passed an act forbidding all enclosures of public land. In 1890 Colorado was admitted into the Union. After the territory had become a state Camfield erected a fence around two townships of land in which he owned all the odd-numbered sections and the United States owned all the even-numbered sections. This fence, however, was erected in such a way as not to trespass on any lands of the United States. "The fence," the court remarks, "is clearly a nuisance." The question was whether the general government could abate such a nuisance within the limits of a state. The court declared that the general government has a power over its property analogous to the police power of the state and that the extent to which it may go in the exercise of such power is measured by the exigencies of the particular case, and continued: "While we do not undertake to say that Congress has the unlimited power to legislate against nuisances within a State, which it would have within a Territory, we do not think the admission of a Territory as a State deprives it of the power of legislating for the protection of the public lands, though it may thereby involve the exercise of what is ordinarily known as the police power, so long as such power is directed solely to its own protection. A different rule would place the public domain of the United States completely at the mercy of state legislation." In a word, this case decides that over the public domain within the limits of a state concerning which there has been no reservation of authority by the federal government at the time of the admission of the state and no grant of authority by the state government the United States possesses such police powers as it needs for the protection of its own interests, and no others.

Federal Control Over Wild Life within the States in Areas not Owned by the Federal Government.

There remains the question as to the extent of control over wild life within the states irrespective of federal ownership of the land. This question arose as a result of the treaty of 1916 between the United States and Great Britain. Many species of game birds migrate seasonably between the United States and Canada, particularly the several varieties of wild ducks and geese. Some of these were in great danger of extermination because of lack of adequate protection. The treaty of 1916 provided for closed seasons, migratory game refuges, and other forms of protection. In 1918 Congress passed an act to give effect to this treaty.

The validity of that act came before the Supreme Court of the United States in the case of Missouri v. Holland, 252 U. S. 416. The State of Missouri brought suit to restrain a federal game warden from enforcing the act. The state claimed that the federal government was encroaching on a field reserved to the states by the Tenth Amendment. It is difficult to find in the Constitution specific authority for the control of migratory game by Congress. But the Supreme Court found such authority in the treaty making power. Speaking through Justice Holmes, the Court held that the federal treaty making power, in some cases, may go further than the lawmaking power. The Court said:

"Acts of Congress are the supreme law of the land only when made in pursuance of the Constitution, while treaties are declared to be so when made under the authority of the United States. It is open to question whether the authority of the United States means more than the formal acts prescribed to make the convention." The Court concluded:

"Here a national interest of very nearly the first magnitude is involved. It can be protected only by national action in concert with that of another power. The subject matter is only transitorily within the State and has no permanent habitat therein. But for the treaty and the statute there soon might be no birds for any powers to deal with. We see nothing in the Constitution that comels the Government to sit by while a food supply is cut off and the protectors of our forests and our crops destroyed. It is not sufficient to rely upon the States. The reliance is vain, and where it otherwise, the question is whether the United States is forbidden to act. We are of the opinion that the treaty and statute must be upheld."

From this decision we may conclude that the federal government has the power to protect birds that migrate between different sections of the country and that when Congress so acts in this field any state law concerning these birds inconsistent with the federal law is suspended. This, however, does not mean that the states may not accord such migratory game birds protection additional to that given by the United States.

While this law was upheld because passed in furtherance of the treaty-making power it is probable that similar legislation may be upheld even without the support of the treaty-making power.

While the action taken up to the present time has affected no animal other than migratory birds no reason is apparent why the same principles might not be applied to migratory quadrupeds as well.

Federal power in this field may also be exercised to facilitate the enforcement of state law by virtue of federal control over interstate and foreign commerce. In carrying out this control Congress has made it unlawful to transport from state to state or to a foreign country any bird or nest or egg killed, taken or transported in violation of the laws of any state or province of Canada in which it was killed or taken.

SUMMARY.

Summarizing, I have come to the following conclusions with

reference to the extent of the power of the federal government over wild life.

1. The federal government has complete control over wild life in the territories and the District of Columbia.
2. The federal government has complete control over wild life within areas acquired by it with the consent of a state for the purposes set forth in the Constitution.
3. The federal government probably has complete control over wild life in areas acquired by it with the consent of a state for other national purposes, such as national parks or national forests.
4. The federal government has the same control over the wild life in a given area after cession of jurisdiction by a state as it would have if it acquired the same area with the consent of the state.
5. The federal government has such control over wild life within an area acquired by it for a national purpose without the consent of the state and held by it without cession of jurisdiction by the state as may be necessary to effectuate that purpose and protect federal property.
6. The federal government has such control over wild life on lands owned by it but not used for a national purpose as may be necessary to protect its property.
7. The federal Government has such control over wild life throughout the entire area of the states as may be necessary to protect migratory game in furtherance of treaty obligations.

Mr. McCutcheon: That refers to public land which has never been filed on.

Mr. Orfield: The fact that public domain has at all times been in the authority beyong the protection of that general domain. If certain public domain belonging to the United States is in danger of abuse or certain things found on that public domain are in danger of destruction, than the United States could step in and assume control.

Mr. Rudrud: I am wondering just how much control the United State government assumes over the flight of migratory fowl. As late as two years ago the government took upon itself the right to govern the importation of migratory fowl from Canada. If one of our citizens went into Canada, bought a license and legally took the birds permitted under the license, that American citizens is not allowed to bring that bag limit into the United States. We can't go up to Canada, get some shooting legally, and bring the results back home.

The other question is this. Does game legally taken, become perconal property.

Mr. Orfield: As to the first question. I don't think there is any doubt but that if the United States government acting through Congress wishes to prohibit the importation of game it can do so. Understand that I am not passing judgment on the policy of such action, but the power that the government has. The Constitution gives such power to Congress.

Now as to the second question. I believe that game does

become personal property but is is subject to the limitations set down by the various controlling agnecies. It is quite differenct if you were to kill a hog. The government could not very well step in and say you must dispose of it within a certain time. But when it comes to the matter of game, your property rights have some limitations. I believe that the government has every righ to say to you that if you kill game on October 30, - it must be disposed of by November 5, or some other date.

Mr. Swift: You cited several instances wherein the United States comes into states and purchases property. On what authority do they come in and purchase property without an enabling act and not use ir for the specific purpose and at the same time take it off the tax rolls.

Mr. Orfield: I do not know that this question is definitely decided by any Federal case, at least not in the full scope of them, but there are cases that go so far as to say that the United States may acquire land for certain purposes. That is land for national parks, military reservations, etc., but how much further than that they can go we have nothing definite in court cases.

You may ask can they acquire national forest except through the invoking of the principle of eminent domain. That question has not been decided. But it might be decided upon the ground that the acquisition of the national forest was necessary so that the government might control head waters. The government has the right to control stream flow in navigable waters necessary to interstate commerc . I might say that the Federal Courts have upheld the power of the government to do this.

Mr. Swift: Would that apply to farm lands that they purchase and call sub-marginal land.

Mr. Orfield: I think there are lands in practically every state which it would be well for the government to take over under the power of eminent domain. But there are other lands which I do not believe they can take unless it can be proven that the government should control them in order to regulate interstate commerce, water power, or control head waters of streams.

Mr. Johnson: We come now to the discussion of the state authority in the control of wild life and we have asked one of our very good friends of the conservation department in South Dakota to present this subject to you. I might add that he is one of enthusiasts in our work in South Dakota and gives very generously of his time and his talent in helping us with our work. I am very glad to present to you Mr. Jones.

Mr. Jones: "Constitutionality of Game Administration. The period in the history, growth and devlopment of the United States has been reached when it is necessary to stop and determine the constitutionality of laws, rules and regulations relating to wild life, which govern and control the acts and conduct not only of individuals but of our national and state

governments and of the three branches of governments.

As long as game, fish and other fomrs of wild life were plentiful; as long as there were new and unspoiled hunting and fishing grounds; as long as conservation was unnecessary because there was wild life in plenty; as long as nature could keep ahead of man; as long as it was unnecessary to place limitations and restriction of the sportsmen, it was unnecessary to consider the limitations placed upon game administration.
But now, with the increased millions in population, the increased numbers of those who have taken to the out-of-doors; the modern highways and ready means of travel by automobile and airplane to the forests, fields, lakes, and streams; the modern firearms and ammunition with their added killing power; the highways leading to the habitats of wild life; the failure of the people to protect and conserve wild life; the mistakes made in unwise drainage; the unjustified destruction of our forests; the widespread drought; the failure to observe the laws of nature; the failure to adopt wise policies of conservation; and the natural results to be expected in the growth and development of the country, we have now reached the point where checks and balances must be applied in any program of conservation. When these checks and balances are applied we are confronted with the question of determining, first, how these checks and balances can be made legal and become enforceable; and secondly, how far they can be applied to the individual and to the three branches of government, both federal and state.

When we consider the question of game administration, we are immediately confronted with the question of federal power as compared with state rights. And while it is not my purpose to discuss this question, I do desire to touch upon it, because in considering the constitutionality of game administration it is necessary to first determine whether the power and duty of game administration is vested in the federal government or in the several states.

I believe I am correct in stating that the power and the resulting duty of game administration is vested in the several state governments. I have reached this conclusion from a study of the decisions of the supreme court of the United States.

The supreme court of the United States, in the case of Shively V. Bowlby (38 L ed. 331), said (Quote)
"By the common law both the title and the dominion of the sea, and of rivers and arms of the sea, where the tide ebbs and flows and of all the lands below high water mark, within the jurisdiction of the Crown of England, are in the King. Such waters, and the lands which they cover, either at all times, or at least when the tide is ink are incapable of ordinary and private occupation, cultivation and improvement; and their natural and primary uses are public in their nature, for highways of navigation and commerce, domestic and foreign, and for the purpose of fishing by all the King's subjects. Therefore the title, in such lands, as of waste and unoccupied lands, belongs to the King as the sovereign; and the dominion thereof, is vested

in him as the representative of the nation and for the public benefit."

"The common law of England upon this subject, at the time of the emigration of our ancestors, is the law of this country, except so far as it has been modified by the charters, constitutions, statutes or usages of the several colonies and states, or by the Constitution and laws of the United States.

"The English possessions in America were claimed by right of discovery. Having been discovered by subjects of the King of England, and taken possession of in his name, by his authority or with his assent, they were held by the King as the representative of and in trust for the nation; and all vacant lands, and the exclusive power to grant them, were vested in him. The various charters granted by different monarchs of the Stuart dynasty for large tracts of territyory on the Atlantic coast described and the powers of government, including the property and the dominion of lands under tide waters. And upon the American Revolution allthe rights of the Crown and of Parliament vested in the several states, subject to the rights surrendered to the national government by the Constitution of the United States."

"The new states admitted into the Union since the adoption of the Constitution have the same rights as the original states in the tide waters, and in the lands below the highwater mark, within their respective jurisdictions."

"But Congress has never undertaken by general laws to dispose of such lands. And the reasons are not far to seek."

"Lands under tide waters are incapable of cultivation or improvement in the manner of lands above high water mark. They are of great value to the public for the purposed of commerce, navigation and fishery. Their improvement by individuals, when permitted, is incidental or subordinate to the public use and right. Therefore, the title and the control of them are vested in the sovereign for the benefit of the whole pepple.

"At the common law, the title and the dominion in lands flowed by the tide were in the king for the benefit of the nation. Upon the settlement of the colonies, like rights passed to the grantees in the royal charters, in trust for the communities to be established. Upon the American Revolution, these rights, charged with a like trust,were vested in the original states, within their respective borders, subject to the rights surrendered by the Constitution of the United States.

"Upon the acquisition of a territory by the United States, whether by cession from one of the states, or by treaty witha foreign country. Or by discovery and settlement, the same title and dominion passed to the United States, for the benefit of the whole people, and in trust for the several states to be ultimately created out of the territory.

"The new states admitted into the Union since the adoption of the Constitution have the same rights as the original states in the tide waters, and in the lands under them, within their respective jurisdictions. The title and rights of riparian

or littoral proprietors in the soil below high water mark, therefore, are governed by the laws of the several states, subject to the rights granted to the United States by the Constitution.

The United States, while they hold the country as a territory, having all the powers both of national and of municipal government, may grant, for appropriate purposes, tktles or rights in the soil below high water mark of tide waters. But they have never done so by general laws; and, unless in some case of international duty or public exigency, have acted upon the policy, as most in accordance with the interest of the people and with the object for which the territories were acquired, of having the administration and disposition of the sovereign rights in navigable waters, and in the soil under them, to the control of the states, respectively, when organized and admitted into the Union".

"Grants by Congress of portions of the public lands within a territory to settlers thereon, though bordering on or bounded by navigable waters, convey, of their own force, no title or right below high water mark, and do not impair the title and domain of the future state when created; but leave the question of the use of the shores by the owners of uplands to the sovereign control of each state, subject only to the rights vested by the Constitution of the United States."

"The donation land claim, bounded by the Columbia river, upon which the plaintiff in error relies includes no title or right in the land bleow high water mark; and the statutes of Oregon; under which the defendants in error hold, are a constitutional and legal exercise by the state of Oregon of its dominion over the lands under navigable waters." (End of quote)

The supreme court of the United States, in the case of Geer V. State of Connecticut, 40 L ed. 793, recognized the power of the state of Connecticut to enact laws relating to game by holding that a state has power to make it an offense to have in possession, for the purpose of transportation beyond the state, birds which have been lawfully killed within the state during the open season; and held that such a state statute does not violate the interstate commerce clause of the constitution of the United States.

In its decision, the court, speaking through Justice White, said, (Quote:)
"In the feudal as well as the ancient law of the continent of Europe, in all countries, the right to acquire animals of a wild nature by possession was recognized as being subject to the governmental authority and under its power, not only as a matter of regulation, but also of absolute control. Merlin, mentions the fact that although tradition indicates that from the earliest day in France every citizen had a right to reduce a part of the common property in game to wonership by possession, yet it was also true that, as early as the Salic law, that right was regulated in certain particulars. Pothier in his treatise on Property speadks as follows:

"'In France, as well as in all other civilized countries of Europe, the civil law has restrained the liberty which the primitive law of nature gave to every one to capture animals who, being in their wild state, belong to no person in particular. The sovereigns have reserved to themselves and to those to whom they judge proper to transmit it the right to hunt all game, and have forbidden hunting to other persons. Some ancient doctors have doubted if sovereigns had the right to reserve hunting to themselves and to forbid it to their subjects. They contend that as God has given to man dominion over the beasts, the prince had no authority to deprive all his subjects of a right which God had given them. The natural law, say they, permitted hunting to each individual. The civil law which forfibs it is contrary to the natural law and exceeds, consequently the power of the legislator, who, being himself submitted to the natural law, can ordain nothing contrary to that law. It is easy to reply to these objections: From the fact that God has given to human kind dominion over wild beasts, it does not follow that each individual of the human race should be permitted to exercise this dominion. The civil law, it is said, cannot be contrary to the natural law. This is true as regards those things which the natural law commands or which it forbids; but the civil law can restrict that which the natural law only permits. The greater part of all civil laws are nothing but restrictions of those things which the natural law would otherwise permit. It is for this reason, although by the pure law of nature hunting was permitted to each individual, the prince had the right to reserve it in favor of certain persons and forbid it to others.' (Pothier, Traite Du Droit de Propriete, Nos. 27, 28.)

"' The right belongs to the king to hunt in his dominion; his quality of sovereign gives him the authority to take possession above all others of the things which belong to no one, such as wild animals; the lords and those who have a right to hunt hold such right but from his permission, and he can affix to this permission such restrictions and modifications as may seem to him good. (No. 32.)'

In tracing the origin of the classification of animals in their wild ste as things common, Pothier moreover says;

"'The first of mankind had in common all those things which God had given to the human race. This communtiy was not a positive communtiy of interest, like that which exists between several persons who have the ownership of a thing in which each have their particular portion. It was a communtiy which those who have written on this subject have called a negative community, which resulted from the fact that those things which were common to all belonged no more to one than to the others, and hence no one could prevent another from taking of these common things that portion which he judged necessary in order to subserve his wants. Whilst he was using them others could not disturb him, but when he had ceased to use them, if they were not things which were consumed by the fact of use, the things immediately re-entered into the negative communtiy, and another could use them. The human race having multiplied, men partitioned among themselves the earth and the greater part of those things which

were on its surface. That which fell to each one among them commenced to belong to him in private ownership, and the process is the origin of the right of property. Some things, however, did not enter into this division, and remain therefore to this day in the condition of the ancient and negative community. (No. 21.)

"Referring to those things which remain common, or in what he qualified as the negative community, this great writer says. "These things are those which the jurists called community property. Marcian refers to several kinds--the air, the water which runs in the rivers, the sea and its shores... As regards wild animals in their wild state, they have remained in the ancient state of negative community.

"In both the works of Merlin and Pothier, (ubi supra,) will be found a full reference to the history of the varying control exercised by the lawgiving power over the right of a citizen to acquire a qualified ownership in animals in their wild state evidenced by the regulation thereof by the Salic law, already referred to, exemplified by the legislation of Charlemagne, and continuing through all vicissitudes of governmental authority. This unbroken line of law and precedent is summed up by the provisions of the Napoleon Code, which declare (arts. 714,715); "There are things which belong to no one, and the use of which is common to all. Police regulations direct the manner in which they may be enjoyed. The faculty of hunting and fishing is also regulated by special laws.' Like recognition of the fundamental principle upon which the property in game rests has led to similar history and identical results in the common law of Germany, in the law of Austria, Italy, and, indeed, it may be safely said in the law of all the countries of Europe. (1 St. Joseph Concordance, 58.)

"The common law of England also based property in game upon the principle of common ownership, and therefore treated it as subject to governmental authority."

"'But, after all, there are some few things which, notwithstanding the general introduction and continuance of property, must still unavoidably remain in common, being such wherein nothing but an usufructuary property is capable of being had; and therefore they still belong to the first occupant during the time he holds possession of them, and no longer. Such (among others) are the elements of light, air, and water, which a man may occupy by means of his windows, his gardens, his mills, and other conveniences; such also are the generality of those animals which are said to be wild animals, or of a wild and untamable disposition, which any man may seize upon or keep for his own use or pleasure.' (2 Bl. Com. 14.)

"There still remains another species of prerogative property, founded upon a very different principle from any that have been mentioned before; the property of such animals in their wild state as are known by the denomination of game, with the right of pursuing, taking and destroying them; which is vested in the King alone and from him derived to such of his subjects as have received the grants of a chase, a park, a free warren, or free

fishery... In the first place, then, we have already shown, and indeed it cannot be denied, that by the law of nature every man from the prince to the peasant has an equal right of pursuing and taking to his own use all such creatures as are in their wild state and therfore the property of nobody, but liable to be seized by the first occupant, and so it was held by the imperial law as late as Justinian's time.1.. But it follows from the very end and constitution of society that this natural right, as well as many others belonging to man as an individual, may be restrained by positive laws enacted for reason of state or for the supposed benefit of the community.' (2 Bl. Com. 410.)

"The practice of the government of England from the earliest time to the present has put into execution the authority to control and regulate the taking of game.

"The common ownership, and its resulting responsibility in the state, are thus stated in a well considered opinion of the supreme court of California: ' The wild game within a state belongs to the people in their collective sovereign capacity. It is not the subject of private ownership, except in so far as the people may elect to make it so; and they may fi they see fit, absolutely prohibit the taking of it, or any traffic and commerce in it, if deemed necessary for its protection or preservation, or the public good.' (Ex Parte Maier, ubi supra.)

The same view has been expressed by the supreme court of Minnesota as follows:
"We take it to be the correct doctrine in this country that the ownership of wild animals, so far as they are capable of ownership is in the state, not as proprietor but in its sovereign capacity, as the representative and for the benefit of all its people in common.' (State v Rodman, supra.)" (End of quote)

Mr. Justice White, speaking for the United States Supreme Court in the case of Ward v. Rose Horse, (46 L ed 244), used these words, "The power of a state to control and regulate the taking of game cannot be questioned." and "The power of all the states to regulate the killing of game within their border will not be gainsaid."
"Since the fish in the waters of a state belong to the people of the state in their sovereign capacity, they are not the subject of interstate commerce to the extent that other property within its limits may be. The state has the power to dictate the circumstances under which its fish shall be taken; and if it deems it expedient for the preservation of the fish to enact that certain fish shall not be possessed in close season for the purpose of their exportation from the state, the interstate commerce clause of the federal constitution does not forbid. Likewise, a state regulation limiting the taking of fish is not unconstitutional because a person wishing to take the fish in contravention of the statute intends to ship them out of the state. And it is clear that a state may regulate the shipment and disposition of fish and oysters within its borders for the use of its citizens so as to prevent their becoming articles of interstate commerce. It may be that the state has no authority absolutely to forbid the importation of fish from another state, but, as a means for the effective enforcement of its own statutes, it may

forbid the sale, or possession of fish for sale, within the state during a close season, though the effect of such legislation is to prohibit the sale of fish imported from other states. Nor the enforcement of its statutes relative to the unlawful taking of oysters, a state may pass an act forfeiting to the state a vessel employed in the unlawful taking of oysters, though the vessel is licensed and enrolled under the laws of the United States." (Sec. 32, Vol. 11 R. C. C. 1045.)

The regulatory power of a state extends not only to the taking of its fish, but also over the waters inhabited by the fish. It care of the fish would be of no avail if it had no power to protect the waters from pollution. It is immaterial whether the water is navigable or not; to the extent that streams are common passageways for fish to and from their breeding and feeding grounds, they are public waters and subject to governmental navigation.

In Ruling Case Law, (Vol. 12, p. 691), we find this statement: "There is no dissent from the general proposition that the state has the authority to make regulations tending to conserve the game within its jurisdiction. This power of the state is based largely on the circumstance that the property right to the wile game within its borders is vested in the people of the state in their sovereign capacity; and, as an exercise of its police powers and to protect its property for the benefit of its citizens, it is not only the right but it is the duty of the state to take such steps as shall preserve the game from the greed of hunters. Though the state derives its title to the game from inheritance from the English crown, it is not alone this which justifies regulatory statutes; as a matter of public interest and police power, the state may take such means as are reasonably necessary to preserve food animals from extermination or undue depletion. The protective power of the state extends also to animals not generally used for food. For example, the useless destruction of non-game birds such as herons may be prohibited. So, too, the regularoty power of the state extends to wild animals which are bred and raised in captivity. The right to kill game is a boon or privilege granted, either expressly or impliedly, by the sovereign authority, and is not a right inhering in any individual; and, consequenty, nothing is taken from the individual and his constitutional rights are not infringed when he is denied the privilege or limitations are placed on the killing or marketing of game."

Thus I have reached the conclusion that the matter of game administration, which in its broader sense includes fish administration, is vested, in the several states. And we therefore approach the question of the constitutionality of game administration with the premise that the administration of our game and fish laws is vested in our state governments.

It then naturally follows that it is the legislative branch of state government that must create the machinery and enact the laws governing and controlling game administration. Adn the particular question is how and to what extent legislatures may and should go in enacting laws governing the administration of game.

In recent years there has been a tendency by legislatures to recognize the fact that it is impossible to enact laws setting open and closed seasons for hunting and fishing that are sufficiently elastic to meet changing biological balances, varying dates of spawning due to varying temperatures, fluctuation in water levels, scarcity of feed, and other conditions that have a direct bearing upon open seasons and bag and string limits; and, in an effort to provide elasticity in game and fish regulations, have delegated to administrative officers and departments the power to regulate the taking of game and fish.

From the standpoint of conservation, there can be no question that it is sound practice to delegate the regulation of wild life to a department of game conservation. But the difficulty with this plan is that the law forbids the legislature delegating this power, because it is delegating legislative power to an administrative office or department. Hence we are confronted with the problem of determining how far and to what extent power can be delegated by a legislature to a department of conservationg.

It is a fundamental and general rule of constitutional law that a legislature cannot delegate legislative authority to an executive or administrative officer, board of commission. There is however a limitation on this general prohibition; and one of the most important limitations consists of a recognition of the right of a legislature, under certain circumstances, to delegate to executive officers, boards and commissions authority to promulgate rules and regulations.

The principal governing the conditions under which this power may be delegated has been stated by one authority in these words: (Quote) "A legislature in enacting a law complete in itself designated to accomplish the regulation of particular matters falling within its jurisdiction, may expresssly authorize an administrative commission within definite valid limits to provide rules and regulations for the complete operation and enforcement of the law within its express general purpose. As an illustration of the proper exercise of the power of a legislature to delegate authority to extablish rules and regulations, may be mentioned acts of a legislature empowering boards and commissions to regulate the taking of fish or the construction of fish-ways.

"There are no constitutional objections arising out of the doctrine of the separation of the powers of government in the creation of administrative boards empowered within certain limits to adopt rules and regulations, and authorizing them to see that the legislative will expressed in statutory form is carried out by the persons over whom such board may be given administrative powers. Boards and commissions of this character do not exercise any of the powers delegated to the legislature. They do not make any laws. They merely find existence of certain facts, and to these findings of fact the law enacted by the legislature is applied and enforced." (Unquote.)

In game administration there must of necessity be penal statutes. A legislature cannot delegate to a board or commission or to an executive officer the power to declare what acts shall constitute a criminal offense.

Before there can be a valid penal statute, there must be in all cases statutory authority for declaring that an act amounts to a crime.

Therefore in determining the constitutionality of laws relating to game administration we must keep definitely in mind two very definite rules of constitutional law. First, that the right and authority to enact laws relating to game and fish is vested in the several states and not in the federal government. And second, that the authority of the several states to enact laws relating to game and fish is vested in the legislative branch of government, and this legislative authority cannot be delegated to an executive or to a board or commission.

In the recent case of the State of Iowa v Van Krump decided by the supreme court of Iowa on March 5th of this year, we find a very good example of the limitations placed upon a legislature in attempting to transfer or delegate the power of making laws to a commission or a board. The legislature of Iowa attempted to delegate to its conservation commission the right and authority to adopt rules and regulations for the propagation, the protection, the trapping, hunting, pursuing, catching, killing fishing for, or taking an any manner of, or the selling or transportation of all or any portions, or the use or the having possession of any fish, bird, mussels, fur-bearing or other animals, the protection of which may be advisable throughout or in a portion of the state of Iowa. Whenever, after investigation, such regulations shall be deemed desirable for the proper use and conservation of the resources of the state and to temporarily establish, regulate and close to hunting and trapping or fishing fish, game, fur-bearing animal and protected bird refuges and to close or regulate such other lands, streams or waters or portions thereof to hunting, fishing or trapping as in its judgment may be deemed best to perpetuate any kind of fish, game, fur-bearing animals and protected birds to maintain an adequate supply thereof. The defendant was arrested chargedwith the unlawful possession of channel catfish during the closed season and for the taking of the fish with illegal devices, to-wit: hoop nets. It was charged that the act was committed contrary to certain sections of the "Iowa-Angling-Regulations" and contrary to the statutes of Iowa. Two informations were filed against the defendant, charging him with offenses made so under certain rules and regulations adopted by the state conservation commission and not by any statute. The state contended that the conservation commission had authority to adopt and promulgate rules and regulations for the protection of fish, etc., and make the violation thereof a crime. The supreme court of Iowa held that its legislature could not under its constitution transfer or delegate the power of making laws to a commission or board and that the legislature in attempting to delegate to the conservation commission power to adopt and promulgate rules and regulations and to make the violation thereof crime was a violation of the constitutional provisions of the state of Iowa, and wholly void.

In determining what is and what is not a valid delegation of legislative power is well stated in the decision of the supreme court of Florida in these words: (Quote) "It may be stated the

the paramount test as to whether or not a particular statute amounts to an invalid delegation of legislative power is the degree of completeness of the statute as it appears when it leaves the hands of the legislative body. The law must be so complete in all its terms and provisions when it leaves the legislative branch of the government that nothing is left to the judgment of the delegate or appointee of the legislature, and where a statute passed by the Legislature is not complete as legislation, but authorizes an executive board or some other named authority to decide what should and what should not be deemed infringement of the law, it must be held unconstitutional as attempting to make an improper delegation of legislative power." (Unquote)

The supreme court of the United States has said: (Quote) "The legislature cannot delegate its power to make a law, but it can make a law to delegate a power to determine some fact or state of things upon which the law makes or intends to make its own action depend." (Unquote) In this rule of law, there is the solution of the problem confronting the enactment of laws relating to game administration, and it has, I believe, been very aptly applied by the state of Iowa in a law passed within the past few weeks. The Iowa legislature enacted a law making it unlawful for any person to take, pursue, kill, trap or ensnare, buy, sell, possess, or transport any game, protected non-game birds, fur-bearing animals or fur or skins of such animals, mussels, frongs, spawn or fish, or any part thereof, except upon the terms, conditions, limitations and restrictions set forth in the law and administrative orders necessary to carry out the law. In other words, the legislature placed a closed season on everything. It then provided as follows: (Quote)
"The open season, closed seasons, bag limits, catch limits, possession limits and territorial limitations set forth herein pertaining to fish, game and various species of wild life are based upon a proper biological balance as hereinafter defined being maintained for each species or kind. The seasons, catch limits, possession limits and territorial limitations set forth herein shall prevail and be in force and effect for each and every species of wild life to which they pertain as long as the biological balance for each species or kind remain substantially as it is at the time this act takes effect. The commission is hereby designated the sole agency to determine whether a population of wild life exists contrary to the aforesaid condition in any area. If the commission, after investigation finds that the number and/or sex of each or any species or kind of wildlife is at variance to aforesaid condition, the commission shall be administrative order extend, shorten, open, or close seasons and/or change catch limits, bag limits and/or possession limits or areas in accordance with said findings. For the purpose of this section, biological balance is defined as that condition when all losses to population are compensated by natural reproductivity or artificial replenishment, replacement or stocking."

The other method most commonly followed, and which is in effect in most states, is for the legislature to fix the open and closed seasons, bag catch and possession limit, thereby leaving nothing to the discretion of an administrative board or commission.

It is my own personal opinion that the plan adopted by the state of Iowa has many advantages; in particular, the power delegated to the commission, and which power I believe to be a valid delegation of power, to determine the biological balance of each species or kind of game, fish or other wildlife, and endeavor to maintain such a balance.

There is much merit in the holdings of the court that legislative authority cannot be delegated to an executive, a board or commission, because if such a delegation of authority were permitted, we would soon have a purely bureaucratic form of government, and as stated by the Iowa supreme court, (quote) "once such bureaucracy has fastened itself into the life of legislative power, little else need be done by the legislature than to meet and create boards." (unquote.) It also says, (quote) "The legislature cannot transfer the power of making laws to anyone else, or place the right to make laws anywhere but where the people have placed it." (Unquote.)

A conservation commission is created and appointed for the purpose of administering the laws and not for the purpose of making the laws. This places no serious handicap in the way of conservation, because, as I have pointed out, the necessary discretionary powers can be created under the plan adopted by the state of Iowa.

Mr. Johnson: Can a legislature by an act of the legislature take away from the state its constitutional rights of acquiring land for the protection of game and wild life.

Mr. Jones: Not unless the constitution of the state authorizes the legislature to do so.

Mr. Johnson: In connection with this matter of game conservation and the control of wild life, we come to the question of what is to be done about land which has never been thrown open to homestead by the Federal Government. There has been no cession of any rights by the state and no action by the state at all. What is the status of game within such areas.

Mr. Jones: Those lands or rather the game in those lands is subject to state regulations unless it effects some national resource of constitutes some sort of an emergency which is national in character. All wild life in any homestead area is subject to state regulation as against Federal regulation.

Mr. Blizzard: In a situation where the state has ceded property to the government and in the ceding rights has said that the Federal Government should not or could not, by any act of congress or the act of any Bureau interfere with the fishing rights of the waters in this land. Now suppose that at the time of the migratory water fowl flight a citizen were found out in one of these rivers in a boat, could the government stop him from fishing.

Mr. Jones: I would say no. The citizen has a right to be there if he is not violating the law of Iowa.

Mr. McKenzie: It is entirely possible that the state of facts might be different than outlined here and the man would not have a right in the stream. In Iowa the legislature gave the commission all sorts of authority but in other states it might be held

that the legislature had exceeded its rights to delegate authority.

In Wisconsin the legislature by statute gave us the power to protect certain waters, so the conservation commission set up and passed certain regulations governing the seining of fish. We cooperated with the state of Minnesota in protecting the waters between our states. Then a fellow by the name of Sorenson was caught netting catfish contrary to the regulations and was prosecuted under the regulations of the commission and convicted. He carried it to the upper courts and the upper court unanimously found that the delegation of authority by the legislature in this particular case had been entirely proper.

Now that case is very short one and to the point. I think it is one of the finest decisions ever made as to the delegation of power.

I heard recently too that the Michigan legislature had delegated certain powers to their commission in connection with the regulation of certain problems they had.

Mr. Jones: Please understand that I do not uphold the violator of the regulations which you set up in your commission but I believe that if he harried it to a Federal Court, he might get a different ruling.

Now we haye several bodies of water in South Dakota just as Minnesota has and these lakes are pretty close together. For several years these furnished the only bass fishing to be had and then arrangements were made and power delegated to the commissions of each state to set up certain seasons. That is in my opinion proper delegation. When they delegate the power to close off the lakes entirely too fishing it is all right but when they delegate the power to set up certain limits they are wrong in so doing.

It strikes me that the Wisconsin legislature clearly violated its right to delegate power when it gave you the power to set up regulations creating a criminal. It is fundamental that only a state legislature can pass laws which will create a criminal of any person who violates these laws.

Mr. Hutton: The upper court in Iowa in deciding the right of the commission to certain powers, made a very short decision. I think they referred back to some highway case in order to find the fundamental law upon which to base their decision as to the legislature attempting to delegate too much authority.

Our state legislature has since passed a new law which gives us about everything we want in relation to this conservation work. We can declare closed seasons, establish bag limits, do just about what we want in order to properly regulate the taking of game.

Mr. Jones: One thing I did not cover in my paper was this matter of the right of the state or government to destroy lakes and marshes in the construction of highways or public roads, and this destruction is, as you all know, detrimental to fish and game. The right of the public in fish and game life is paramount to the right of the public in state highway and road building through

lakes and marshes. I do not believe that the state could go to court and show the necessity for crossing these streams and lakes. This is almost a field within itself for consideration by your commissions in your conservation work.

Mr. Johnson: There has been some discussion here as to this question of enabling acts. I want to read what you legislature has said in that connection: "The State of South Dakota hereby assents to the provisions of the act or acts of Congress authorizing federal participation with the various states in projects for the propogation, preservation and protection of game and fish and the Game and Fish Commission of the State of South Dakota is hereby expressly authorized and empowered to cooperate with the appropriate agency department or commission of the Federal Government in projects for the propagation, preservation, and protection of game and fish and to use and expend funds of the Department of Game and Fish in connection with like appropriations of the Federal Government for such projects.

"So that the United State may acquire by deed or other instrument or conveyance, areas of land, water, or land and water within this state, for the better protection of desirable migratory birds, the State of South Dakota hereby consents to the acquisition by deed or other instrument or conveyance by the United States of land, water, or land and water within this state, under the terms of the Federal Migratory Bird Conservation Act of 1929.'

The question that comes up now is whether the state legislature can constitutionally grant such instruments to the United States Government without submitting them to the public for vote.

Is that an infringement on my rights as guaranteed me under the Constitution as a citizen of the state.

Mr. Jones: That doesn't grant them the right to come in and take it away from you by right of public domain. In other words if you want to sell it for money, that is all right, but the Federal Government cannot be given the land nor can they come in and seize it.
If the enabling act had gove to the point of authorizing the Government to take land by the right of public domain, they would have exceeded their authority. The act as you read it merely authorizes them to come in and buy it. There is no force attached to it.
Mr. Johnson: Well, there might be a lake which the state had been using as a fishing ground and public park for all of the people and the government might come in and say, we want that. This angle of this act is one which many think should have been submitted to the people.
Mr. Jones: I don't believe so. The act simply authorizes the United States to come in and buy the land. It doesn't forde the owner to sell.
Mr. Johnson: It is getting late and we have some fine entertainment in store. We expect to have all of these papers and discussion out very promptly for you. All of this information will be available. We will adjourn now until tomorrow morning. I would suggest that we all get together now in preparation for the entertainment at the Izzak Walton Club House.

Adjourned.

SUNDAY MORNING

Mr. Johnsnn: I want to call on Mr. Davison of the Soil Conservation Department for a few words. One of the prime objec of our association is the conservation of game life and I believe that Mr. Davison has an interesting story to tell you.

Mr. Davison: Your meetings have been interesting to me. You have had some discussions that I have found it difficult to keep out of. I am somewhat familiar with the many trials and tribulations that you folks have gone through, but throughout all of your discussions I haven't heard much discussion on one point which I am convinced is an extremely important one and that is the relation of wild game management to agriculture.

I don't know whether you have any idea of the relation of wild life management to the problem of erosion control and how this erosion control improves conditions for wild life. It seems to me that these two matters are inter-related and that wild life management is supplementary to our work.

Our territory covers all of South Dakota, Montana, Wyoming and a part of North Dakota, and these northern plain states which have suffered so much from erosion because of the drouth.

We are trying some new things in our service and these convince us of the close relationship between wild life management and our own work. Because of the por conditions surrounding our control work during the past few months, this work doesn't show up as yet like we would like to have it. I have set up a relief map in the back of the room and there are several illustrations there which will show you some of the work we are doing which we think will mean a great deal to wild life.

We are attempting to improve agriculature which is the primary reason for our existence, but in so doing we are also creating natural coverage, food, and water for the wild life. You mentioned in this meeting two or three times the increase in water fowl that is so noticeable, and how that was attributed to the supply of water and better feeding facilities. We believe that some of the work we have been doing has had some effect upon this. A year ago we were not able to make much progress because of the dry weather, but this spring conditions are different and we are hoping to make some excellent progress.

We are carrying on our studies from a standpoint of erosion control. We have found that fall plowing has a lot to do with erosion. It results in a tremendous loss of soil per acre. It is our belief too that fall plowing results in the destruction of more game than the fish and game commissions can put back.

Therefore I think it would prove valuable experience if all of you would go out to some of the demonstration areas in your states and observe at first hand just the type of work we are carrying on. A great amount of our work in this area wad destroyed by the drouth. This year it looks very promising and we hope we will be able to have Mr. Johnson and his men come to one of these areas and look it over. We would like to have all of you come.

We make no regulations for the control of game and fish. We do what we can to carry out the programs which your commissions have set up. We want to make refuges for this game and help in your work, but we are a service bureau and our efforts are to help agriculture and in this work we have found a very close relationship to wild game management. We have found this true in South Dakota and in the 18 other states in which this work is being done.

We know that a very great amount of soil has been destroyed, and that this very large program of soil erosion control is being carried on for the sole purpose of benefitting agriculture and as a product, wild game.

We know that we have increased the natural coverage of game a great deal. A lot of our work has been done in grazing areas and it has been particularly beneficial. We know that waterfowl can use it. And I might add that our service has built some 1000 lakes and ponds in our area, and I believe about 800 of them are North Dakota. Contour work on these areas has resulted in saving much soil, increasing cover and benefitting game.
We have advocated the planting of sun flowers in many areas because we know that they provide good cover and feed, and are permanent. We have had some objections to these because some feel that they cannot be properly controlled but the prime purpose of our work is the saving of the soil and we do know that soil will not blow away when it is covered with sunflowers.

I might say that in 90% of the farms on which we have carried on our soil erosion control work, we have obtained good results and we believe that with the conditions more favorable now - we will be able to show even better results.

Mr. Swift: I quite agree that this soil erosion control work is important. I am very much interested in it and its relation to fish and game conservation work, and whether it is primarily for the conservation of agriculture, or any other thing, I believe it ties in very closely with our own work.

We have some erosion control work going on in Wisconsin. This has been done by strip plating, or plowing, terracing, and the like in order to stop erosion. I am interested in knowing what methods you follow in your area. Do you use strip planting, and terracing.

Mr. Davison: Our problem is not one of water erosion at it is with you in Wisconsin. Ours is due to wind erosion. We do not have any erosion to speak of until the frost goes out of the gound. Of course some erosion is due to too heavy grazing on certain land but our problem is Wind erosion.

You know that wind velocities are comparable to water velocities. Our problem is to reduce our wind, velocities, and in order to accomplish this we resort to sehelter belts five to ten rods in width.

Mr. Johnson: Mr. Speaker want to get away as early as possible

so if he is ready, we will have his paper, 'Pond rearing of Wall Eye Pike:

Mr. Speaker: Yellow pike-perch, or wall-eyes, have been artificially propagated in Iowa for many years. Although the results obtained from planting these fishes in the fry stage have been quite favorable, it was believed that if they could be reared to larger size, their changes for survival under more or less adverse conditions would be greatly increased.

In the spring of 1927, Center Lake, a 250-acre lake, located in Dickinson County, was stocked with 25,000,000 wall eyed pike fry after the game fishes and 236,000 pounds of coarse fishes had been removed. The lake at that time had a maximum depth of 12 feet. The shoreline was a combination of boulder rock and sand, and the bottom was blue clay with a deep over-deposit of silt. The aquatic vegetation consisted primarily of narrow-leaved pond weeds, including Potamogeton pusillus, P. pectinatus, and a considerable amount of Naias flexilis. Blue-green algae, including Aphanizomenon, Microcystis, and Anabaena, were present and their growth was greatly increased by the addition of nitrogenous commercial fertilizers which were added to produce an abundance of zoo-plankton.

Fish foodsorganisms, such as Rotifers, Copepods, Daphnia, and Astrocods, were present in large numbers and increased tremendously during the first season. A considerable amount of midge and damsel fly larvae were also available for consumption.

A year later, during the month of May, 1928, the lake was seined with 2,000 feet of three-quarter inch mesh drag seine and 1,502,000 yearling wall-eyes were removed. These fishes averaged from four and one-half to six inches in length.

These results were gratifying since, to our knowledge, this was the first successful attempt to rear large numbers of pike to fingerling length in the United State.

Center Lake was again stocked in 1928 with 25,000,000 fry and of this number only 372,500 fingerlings were recovered.

Apparently the commercial fishermen had not previously succeeded in removing all of the bullheads, for during the summer of 1928 hundreds of schools of bullhead fry were observed. Although the Department made a desperate effort to remove the bullheads, it was virtually impossible. Stomach analysis of the adult bullheads revealed that a considerable portion of their diet consisted of young wall-eyed pike and fat-head minnows which had been introduced as forage fishes. The lake was abandoned as a pike nursery in 1929, and has since served as one of the most important bullhead production areas in the state.

In 1929 Diamond and Welch Lakes, also in Dickinson County, were cleaned of all species of game and coarse fishes and stocked with pike fry. These lakes are similar biologically to Center Lake, except that they are smaller in size and more shallow. Diamond Lake is approximately 150 acres and Welch Lake is 50 acres. Both lakes have a maximum depth of about six feet.

During the pioneer work of producing wall-eyed pike to fingerling size, we were of the opinion that they should be held in the rearing lake for a period of one year in order to produce a suitable size for stocking.
In 1931, however, we found our two nursery lakes were not of a sufficient depth to carry an adequate supply of dissolved oxygen under adverse conditions during the winter months. We found that, during severe winters, the oxygen inthese lakes would drop to less than 15 p.p.m. which was below the lethal point for fish life and that our losses due to asphyxiation were enormous.
Consequently, then, for the past five years we have made a practice of stocking the fry in May and removing the fingerlings during the months of October and November.

We are hatching 72,500,000 fry at our Spirit Lake hatchery annually. The total cost of this production is $2,698.71 per year, inclusive of all expenses and the cost of securing eggs and hatching operations. The brood fishes are captured on their spawning beds from sundown to four o'clock the following morning in 2½ inch bar measure gill nets. Crews of two men each operate three 200 foot gill-nets. These nets are checked every two or three hours. The eggs and milt are taken from the ripe fishes at the camps and the green ones transferred to the hatchery where they are held in wooden tanks until ripened. The cost of producing fry at this station is $37.19 per million or 3.7¢ per thousand.
During the 1937 season 2,344 males and 1,696 females were used to produce 116,200,00 eggs. According to our calculations 67½ per cent, or 72,500,000 eggs hatched. The cost of obtaining the eggs alone, exclusive of hatching operations, maintenance of buildings, ec., was $8884.50

The following tables show the results obtained from Diamond and Welch lakes for the past five years, not including the cost of the fry:

DIAMOND LAKE

Year	Stocked	Removed	Cost	Each (cents)	Percent
1932	3,000,000	161,000	$3,712.91	2.304	5.36
1933	2,500,000	357,250	4,036.16	1.13	14.28
1934	2,000,000	50,242	1,506.79	3.0	2.502
1935	3,000,000	169,500	904.74	.532	5.65
1936	4,000,000	158,066	1,168,86	.738	3,972

WELCH LAKE

1932	1,000,000	140,425	$1,562.84	1.04	14.0
1933	900,000	78,000	742.70	.95	8.675
1934	None	None	430.96)	Repairs	
1935	None	None	8.92)		
1936	2,500,000	45,493	759.54	1.669	1,818
1937	1,000,000	--	--	--	--

For the past five years the Department has been experimenting on a small pond of approximately one acre located near Fort Dodge in Webster County.
The source of water supply for this pool is diverted from a small tributary of the Des Moines River. The pool is so constructed that it can be filled and completely drained.

stimulate the oxygen supply. The average hydrogen-ion concentration is from 7.4 to 7.8, and the dissolved oxygen varies from 7 p.p.m. in the spring to 3 or 5 p.p.m. during the summer months. Food organisms consist primarily of Daphnia, Rotifers, Diatoms, Nematode worms, midge and damsel fly larvae. Forage minnows are usually introduced just in advance of their spawning season.

This pool has been stocked with varying numbers of fry to ascertain its maximum carrying capacity. The following table shows the results of the pool. It will be observed that the cost has been very low on this unit. The reason for this is because it is only necessary to deliver the fry from the hatchery and to remove them in the fall. This requires only two or three days under normal conditions.

DOLLIVER POOL

Year	Stocked	Removed	Cost	Each (cents)	Percent
1932	70,000	6,200	38.08	.6149	8.87
1933	100,000	7,100	25.25	.3558	7.1
1934	50,000	10,125	15.39	.154	20.23
1935	70,000	7,035	5.75	.0818	10.05
1936	200,000	5,100	15.30	.3	2.55

This season the Department is using three new units for the production of pike fingerlings in addition to the units previously used.

One of the new units, a 20acre pond, is located at Clear Lake, in Cerro Gordo County. It has been formerly used as a large-mouthed bass pond with good results. Aquatic vegetation and food organisms have been well established, and the pond has been especially prepared for the production of pike this season. Fathead and blunt-nosed minnows have been added and the pond has been fertilized to produce an abundance of Crustaceans. The source of water supply is obtained by gravity flow from a creek, and a pumping system from a reserve supply in the event the gravity flow is inadequate. The total cost of operating this pond is approximately $530.00 per year.

The pond has been stocked with 1,000,000 fry, and, at this writing, they are making splendid progress.

Another pond of approximately 25 acres has been acquired near Lanesboro, in Carroll County. This pond is fed entirely by three large artesian wells. It has a maximum depth of about five feet. It, too, has been especially prepared and stocked with 1,000,000 pike fry. Since there are no pumping charged involved, the cost of operating this pond is only $250.00 per year. This pond, as well as the one in Cerro Gordo County, can be drained completely dry.

The third new unit used for pike this season is a 10-acre pond located near Vinton, in Benton County. This pond was constructed on the Cedar River and is filled by overflow waters in the spring. It, too, can be drained during removal operations.

SUMMARY We have found that pike can be reared to fingerling size in comparative large numbers.

The effectiveness of stocking larger size fish is apparent in many sections of the state where the fingerlings have been introduced.

The cost per fish, in most cases, is comparatively low, but particularly in ponds which can be drained to facilitate removal.
We are now in hopes of obtaining much greater yields by the improved cultural methods employed to boost the percentage of fingerlings recovered from the fry.

Mr. McKenzie: Why take them with gill nets.

Mr. Speaker: We find we can take them more economically and with less death loss. We lost only 17 fish out of about 4000 taken and I believe that is a pretty high percentage.

I believe we have a different situation to face than you have in Wisconsin. We have no big streams feeding into our lakes. Our lakes are more shallow and we have never found it advisable to use drag nets. We have tried the use of drag nets on other type of fish. But we have decided that gill nets are the best. Each crew operates three 200 gill nets. The fish are taken out immediately and we actually don't see any advantage to using any other type of net.

We set the nets at sundown and run them hourly. We have especially equipped trucks with air equipment and these trucks make the rounds and we keep the fish alive. They are stripped immediately in camp and released back to the water if they are ready for stripping. If not, we take them back to the troughs.

Mr. Johnson: Mr. O'Connell tells me that Mr. Douglas of Nebraska who was to talk to us about public parks will not be here and that no one has been authorized to speak for him. Possibly we will be able to get this next year. So we will go on to the next paper on the program. North Dakota had a serious loss in upland game birds last year during the winter which as you all know was a particularly severe one. Some effort was made by the Chief of the Game Department to assist in a winter feeding program, and quite an extensive program was carried on. I believe that we will all be very much interested in what success attended their efforts in the artificial feeding of upland game birds.

Mr. Hulterstrom: This subject of the artificial feeding of game birds has been touched upon by previous speakers. While we have no data to give you as to the effect of artificial feeding program, I simply want to give you the result of my observations and I will start by saying that while artificial feeding may in some few instances be advisable and perhaps a necessity, it is my opinion that artificial shelter and feeding is not the ultimate solution of the program.

I know that this statement will be questioned. But nevertheless I believe that it is true. In North Dakota we have heretofore had no program of game conservation and I have been in office such a short time that we have not had time to get our organization started or form any definite plan of procedure.

We assisted in the feeding program because there was an emergency in our heavily populated territory, in the south-eastern part of the state, where we had more than 30 inches of snow and because of the drouth, a very small amount of feed. Practically all of the natural cover was under snow, and naturally we had a very bad situation, and as a consequence of these conditions, we suffered a heavy loss.

On March 15, I made a personal survey through this territory. The reports we had received were very conflicting and I went down there to observe just what the situation really was. The reports were perplexing. I didn't find any great amount of dead birds, nor did I find anything like the number of live birds we might expect. The snow was all gone at the time I made the survey.
I drove 500 miles and covered several sections of land. On this trip as I went through the fields, I picked up a number of birds. I determined to have them examined by the laboratories, so I sent them back to Bismarck. We had previously asked everybody to report dead birds, and to express them in to us. We wanted to find out what caused the death of the birds. We wanted definite information and through the cooperation of the Biological Survey at Bismarck we got it. We posted some 81 birds and it seems strange that was all the number we could get, but that is all. Just 81 of them.

Now our conclusion was that our feeding program last year was very ineffective so far as having birds. In places where we expected the most losses, we found the least. I believe that the reason for this is that we have not given enough consideration to the cooperation of the farmer in the care of these birds.

So far as we are concerned we believe that without proper shelter for the birds, a feeding program is very ineffective. Artificial shelter is necessary in some places. I believe the shelter belt work of the conservation service will be our solution to a large degree. We have entered upon a tree planting program in North Dakota entirely aeparate from the conservation program. We put out 300,000 trees this year, the majority of which were ash and elms. We are planting these in sections where there is a dearth of natural cover, and our plan is that these will be of material help in establishing game refuges and shelters.

I think that plan would be most effective. We have a great many refuges in the state. Some are all right - some are worthless as game refuges. I don't believe we have given enough consideration to what is essential in the way of shelters and cover for upland birds.
I am not going to dwell on this subject. I have quite a knowledge of some of the states represented here. I know conditions in Iowa and know their methods of farming because I have farmed there all my life and lived in Iowa. I know conditions in South Dakota because I homesteaded and lived four years here. I have lived 30 years in North Dakota in different sections of the state from the Red River Valley to the western part of the state. Our farming conditions in Dakota are similar to those in Iowa, Nebraska, and the other states. The crops are diversified and most of our land is under intensive cultivation.

less a suitable environment is created for them. They must have shelter and feed. In bad snow years like the one we had this winter, this natural cover we have is entirely covered. We have to resort to artificial shelter in such instances until such time as the created cover has had time to develop.

I think this conservation program will be the solution because I have noted a marked increase in birds in our valley counties where this program has been operating. I think the work they are doing is bringing the land back, and thus getting the environment for the birds which will bring them back to us.

I t might be interesting to you to know the result of our investigations into the loss of the pheasants which were sent in to us this spring, and while the loss was greater in the western part of the state, in our more heavily populated counties it was less than a year ago.

I have a summation of that report. It is very brief. It might interest you to know just what caused our loss.

Starvation 4, all immature, 3 very thin, one thin; 2 with discolored gizzard, one with hooked bill. Crops empty 4; Gizzard 4 empty. Three of these were extremely thin. One had hooked beak. None had ice in the throat.

Accidental 11 - 4 mature, 7 immature; 6 fat, four fat, one thin; Discolored gizzard 2, one with hooked beak. Crop empty 3, Full 8; Gizzard empty 2, half full 1, Full 8; These flew against wire fences telephone lines, were run over by cars. Most of these picked up along fence lines.

Freezing 6; immature 6; condition 5 fat; 1 thin; crop 5 full, 1 half full; Gizzard 6 full; some question here, but all birds were found with feathers full of ice; ice in nostrils, and balls of ice in the throat.

Killed by predator 7; condition 2 fair 5 fat; 1 discolored gizzard crop 4 full, 3 half full; gizzard 1 half full, 6 full; Unmistakable sings of weasel - coyote, owl, or hawk.

Gunshot 11; condition 6 fair, 5 fat; discolored gizzard 4, 1 hooked beak; crop empty 5, half full 3 full 3; gizzard empty 2; half full 1; full 8. In all of these were found shot or well defined caliber holes. Most of these were males.

Unknown 38; condition 5 very thin, thin 11, fair 16, fat 6; discolored 27, hooked beak 2; crop empty 28, 3 half full, 7 full; gizzard empty 30, half full 1, full 7; ten of this group should perhaps have been included in the gunshot group. In some there were punctures but no pellets.

In addition to these above birds we had two sharp tail grouse and two Hungarian partridges sent in which were posted. The results of this examination were in no way different than those of the pheasants. They did not convince us that the birds had starved to death or frozen to death.

Now we have these problems in North Dakota and I think some of these conditions fit your cases. We have little cover in the western part of the state, but we have more natural food there. We are certain that our loss in that western section of the state was no greater in proportion to the number of birds, than it was in the East.

Mr. Hutton: What do you mean by mature birds.

Mr. Hulterstrom: We mean the age of the bird. Naturally we would expect to find a greater loss in immature birds, but once the bird has reached maturity or become full grown, he is better able to forage for himself.

Mr. Blizzard: This is not a question but a thought. In western Iowa the commission was of the opinion there should be no open season because of a dearth of birds, and we should have a closed season because of it. There saw some shooting in the territory adjacent to these closed counties, but the next year when we went back to this territory we did not find the birds we expected to find. They do not come back like we think they should.

I am thoroughly convinced that other agencies have more to do with this than just the matter of a closed season, etc. Now let me give you an illustration. Over in Cook County we were suddenly aware of a lot of foxes. We did a lot of work getting rid of them or trying to. We decided the foxes were traveling up from the south.

At any rate we suddenly found more foxes in Northern Iowa than we had ever had before. You would be surprised how many there were. The Board of Supervisors placed a bounty on foxes - and it was the best think they possibly could have done. These farm boys were waiting for that and when the bounty was snowed they went out and made themselves more money than they had ever had before. I happened to go into the courthouse over there and passed a group who were going out with $49.00 representing one days work. Altogether there were about 500 fox killed in that region. Now the pheasant population in that territory which is one of the best in the state will never be what it should be until the fox menace is cleared up.

I don't say that the fox got all the birds; we had a lot die- but I do think the fox killed more than the cold winter or starvation. Perhaps some of these things might well be looked into by this group.

Mr. Johnson: Every year we discover some new reason why there is a smaller pheasant population. One year - it is drouth - the next it is food - then a hard winter - next the foxes - and I wonder what it will be next year.

We go along and then we find the crow's guilty of a lot of damage and depredation, and we begin a crow control campaign.

Everything which we have accomplished is a direct result of our interchange of ideas. The pheasants might be scarce because the water and bad conditions - there might be some other reason. The only way we will find it out is to get together in meetings like this and talk it over.

Now a question I would like to have answered is this. What causes the hooked beak in pheasants and other game birds. I wonder if you have noticed it very much Mr. Grimmer in your hatchery work.

Mr. Grimmer: Oh yes, we've noticed it but we haven't decided as yet just what causes it.

Mr. Johnson: I have wondered whether it might not be caused by malnutrition.

Mr. Dumont: There has been some suggestion that the hooked bill or overlapping mandible is the result of a lack of gravel. We checked over 364 pheasants and about one half of them had an overlapping mandible from 1 to 6 inches in length and there wasn't one of them that did not have gravel in the crop or stomach.

That was explained by the fact that in certain convenient spots we had placed from one to four cubic yards of gravel that could be taken. One would think that with this arrangement for sufficient gravel - there would be little or no horn beaks if gravel prevented it, but such was not the case. We did not arrive at a single conclusion in this matter.

Mr. McKenzie: What conclusions have you reached as to pheasant migration. We have localities which are provided with excellent cover, ample feed, and every natural thing which would tend to attract the birds. Yet, we find them remaining in regions within a few miles of these better spots and not moving around much.

Mr. Johnson: We have made some study of pheasant migration. We had a severe hail storm in Dayton County and believe me it was a hail storm. After it was over there wasn't a sign of wild game or bird life in this strip of ground. The storm lasted about an hour and covered a strip of 10 miles wide and 40 miles long. It happened the latter part of July early August. Immediately we were told that the strip would have to be closed to pheasant shooting. We figured at least a 75% was on account of the storm and then we thought we were conservative.

We couldn't close a strip of ground like this without some difficulty we we opened it and permitted the taking of pheasants, and you would be surprised to learn that some of the best shooting we had was on that strip of ground. We finally decided that the birds from both sides had come in because the hail storm had beaten the grain down and left it on the ground, and the birds moved in.

Pheasants, we have found migrate twenty to thirty miles where feeding conditions are more desirable. I don't think the migration takes place all at once. I believe it is a gradual drift spread over several days.

Mr. Swift: We bonded a bird and he was taken 150 miles away from the place of banding.

Mr. Johnson: We have received some bonds, and our limit of migration has been about 50 miles. In one case the check was

made 14 years after the bird was bonded. That is something- a pheasant 14 years old.

I am going to ask Mr. Dumont to tell us a little about the shelter work they have done on the refuge. Have you formed any definite conclusions of these artificial shelters.

Mr. Dumont: We had a population of some 6,000 birds within a quarter miles of the refuge. I would say that about 15 to 18 hundred were outside the refuge hut. Close enough to be called refuge birds - and 4200were on the refuge proper.

We constructed about 60 shelters and of course we were experimenting to determine which was the better type. These were constructed with one open side, and a sloping roof, something on the style of a lean to. We spread them in 15 or 16 different parts of the refuge and arranged them so they would be a source of wind break to keep snow from drifting in.

The artificial feeding work we carried on was done. But we found that the birds were doing very well for themselves in the ided lots of adjoining farms. The birds would go to the feed yards and eat and then go back to the shelter for the night.

Some of these shelters proved to be entirely satisfactory; others snowed over entirely. They behaved exactly like the natural cover and vegetation in North Dakota. We had some 92"of show during the past winter. The district was covered with 5 to six feet of snow for a time. At any rate we learned some valuable lessons. We learned how a shelter belt should be constructed in order to provide good shelter for birds.

I think the Soil Conservation Service will be interested in that work. We learned that the manner of arranging those tree plantings should be bored upon the observations of previous plantings. We utilized 2 or 3 plantings that had been made 8 to 10 years ago and found them extremely effective.

We are convinced that if shelters are to be used, and until such a time as our natural plantings can be brought along until they will serve, and which is far the most desirable thing, if we do not have facilities for providing shelter for these birds we will suffer a heavy loss.

In our district we have areas where the wind blows as high as 60 miles an hour and in these areas instead of putting the shelters in these plantings we are going to put it out on open ground, and construct it in the slope of a lean-to about 4½ ft above ground at the front and large enough so that if the snow does drift it will not drift back in and smother the birds. You know that they will not come into the shelter until conditions are extreme, and then if the snow drifts the shelter fails; we have a heavy resultant loss.

During the past winter we put up snow fences facing the northwest and about 60ft. from the shelter. They did not prove entirely satisfactory but this next winter we are going to up up additional snow fences, facing the northeast from which direction most of the storms seem to come.

We are doing some work in providing the right kind of food for them, planting crops, etc., and we believe this will prove it value. Altogether our work with artificial shelter and feeding is an experiment but it has, in my opinion proven its value.

I want to take the opportunity to its director and the wardens. I believe I represent the sentiment throughout the entire state when I say they are doing a real job. I know we have alot of fun in our work and we are trying to work out a balanced game program.

Mr. Johnson: I am going to go on with the business sermon now. The first order of bisiness is the reading of the report of the Secretary, Treasurer. Since Mr. Foley had to leave, I will read his report.

Now gentlemen, what is your pleasure.

Mr. Redrud: I move the report be accepted.
Mr. Spence: I second the motion.

Motion carried, so ordered.

The next order of business is the selection of a meeting place for 1938.

Mr. McKenzie: An invitation was extended by the State of Nebraska, asking that they be permitted to entertain this group. I move that we accept the invitation.
Mr. Swift: I second the motion.

Mr. Johnson: You have heard the motion and the second. What is your pleasure. Motion carried and we go to Nebraska.

We will now have the report of the Nominating Committee.

Mr. McKenzie: Members of the association. Your nominating committee has the following recommendations to make:
For President, Frank B. O'Connell, Nebraska
For Vice-President, Ernest Swift, Wisconsin
Fro Secretary, Treasury, Chas. McFarlane, Minnesoata
Directors, Layton Blizzard, Iowa; Geo. Walters, South Dakota; C. F. Thompson, Illinois; D. W. Hulterstrom, North Dakota; W. C. Buford, Missouri.

I move the adoption of this report.
Mr. Rudrud: I second the motion.
Mr. Johnson: All in favor, aye - so ordered. I might explain here that the Board of Directors consists of these officers and a representative from each state, consequently no directors were dicted from Nebraska, Wisconsin, Minnesota because the officers served.

I believe that concludes our business and we will stand adjourned.