DETAILS FOR A GAME BREEDERS' LAW.

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It cannot be denied that a law permitting breeders to profitably increase our game should be enacted in every State. As I said last year, it seems idle to suggest to breeders that they should not be permitted to breed.

The resolution adopted by your Association has now been before the people for a year, and it was given a wide publicity by the *American Field*, the *Amateur Sportsman*, and other papers and magazines, yet so far as I am aware no one has openly said a single word in opposition to the resolution.

So far as I know, all of our prominent naturalists are in favor of the protection and increase of North American game by breeders. A number of them have referred to this important matter in no uncertain terms. Dr. Hornaday has said: "The situation is absurd and therefore can not long endure." Dr. Merriam, chief of the Biological Survey, has written that he is strongly in favor of a regulated sale not only of deer but of game birds when properly identified. Dr. Shufeldt says: "I am thoroughly in sympathy with you in what you have to say and what many of your correspondents say on the question of game protection. There is such a thing as protecting birds off the face of the earth, and I stand distinctly opposed to much that pertains to such methods now in vogue."

So far as I am aware no sportsman of any prominence is opposed to the profitable increase of game by breeders. It is a self-evident proposition that the farmers, game dealers, and innkeepers, who will be benefited by a breeders' law, are in favor of it. Many of them have said that such a law would quickly increase the game.

Some of those who have been active in building up our restrictive system in the hope that it would increase the wild food birds, or at least save them from extermination, have made inquiries as to the form of a breeders' law which would enable breeders to sell their birds without endangering the rare and vanishing species which are supposed to be protected by the present game laws.

There are three well-known laws permitting the sale of game and game fish which may be taken as forms or precedents by those who may undertake to prepare a breeders' law for any State. (1) Colorado has had for several years a law permitting the sale of game

from preserves, and under this law the game birds are sold and served in the hotels. The State game commissioner has said the law should remain permanently. (2) Minnesota has a law permitting the sale of trout by breeders, and the executive agent of the board of fish and game commissioners informs me that this law is satisfactory and that it does not result in a loss of trout from the public waters. (3) Massachusetts has a new law permitting the sale of pheasants by breeders, and I know of no objection to this law save one which I have raised: its tendency must be to increase the foreign fowls instead of our own, which easily can be made abundant.

There are other similar laws, some relating to deer only. One law permitting the sale of birds by breeders in North Dakota has been recently enacted, but it has not been on the books long enough for us to know how it may affect the game which no one looks after properly.

My suggestions for the details of a breeders' law briefly are as follows:

Breeders should be defined so that those who own no interest in the game reared may, for the present at least, be prohibited from selling game. Permits or licenses should be issued to breeders upon the payment of a small sum, and the law might provide for the forfeiture of the license provided the person holding it ceased to be a breeder.

Provision should be made for licensing game dealers, and they should be required to give a bond to keep a game register wherein they should enter and list all game received and the names of the breeders sending it. Dealers might be required to file an affidavit at the end of the season stating that no game had been sold illegally. I have been informed that in England, where game is sold during a good part of the year, the reputable dealers are opposed to the few who are suspected of violating the laws, and willingly aid in their apprehension.

It should be far easier for game officers to watch a regulated industry than it is to oversee such sales of game as are now permitted—game birds coming from points distant 25 miles from New York, for example.

One thing we should always bear in mind—the laws should aid the vigilant and not the sleeping. Those who are willing to properly protect and increase our splendid grouse, quail, and wild fowl should be encouraged. Nothing can be accomplished without the expenditure of money, and no one can be expected to invest in an enterprise which

is practically prohibited by law. If any loss should occur by reason of the proposed change in the game laws it must fall on those who do nothing, and it will be more than offset by the game reared by breeders.

Under the present game laws we have State game departments which represent only a small part of the people—a part of the sportsmen, but not all of these by any means. Necessarily these departments are hostile to the farmers, the game dealers, the innkeepers, and all of the people who would be benefited by cheap game. The State game departments under a breeders' law will represent all classes of people, as any governmental department should.

The effect of the resolution which the American Breeders Association passed last year has been good. The proposed breeders' law has been much discussed by sportsmen, and as I have observed there is none who is openly opposed to the common-sense idea that the breeders of game should be permitted and encouraged to rear game birds for the market. Ruffed grouse today are worth \$20 a pair for propagation, and there is a demand for a large number of them. I know a man who successfully reared these birds last season in a wild state on a small country place quite near New York. On the same ground he reared mallards and several species of quail and some Hungarian partridges. Since most of the birds were nesting wild they procured a good part of their food from the few acres of field and scrub oak. The cost of rearing these valuable birds under such conditions should be less than the cost of rearing poultry. No one is permitted to fire a gun on the place. Why should the owner of these birds be prohibited from selling some of them for propagation or as food? Mr. Evans, who has prepared a paper to be read before your Association, informed me (a few days ago when he was in New York) that he had about a hundred cock pheasants left over last season; since most purchasers bought more hens than cocks. Why should he be prevented from selling these extra birds as food?

In order that something may be done toward securing a breeders' law which will be satisfactory to all classes, I would suggest that you appoint a special committee to consider the form of such a law and to recommend its enactment by the various State legislatures, provided the members of the committee agree upon the form of law which will benefit all classes. I would advise that you appoint a committee of nine, to be made up as follows: Two farmers; two sportsmen; two game dealers (one to be a dealer in live game); two hotel

keepers, and one prominent naturalist. I would suggest that at least one of the first named be the president or other prominent officer of a grange; that one of the sportsmen, at least, be a prominent member of a State game protective association, and one be appointed from those who favor a breeders' law; that one of the innkeepers be the president of a State hotel men's association; and that Dr. Hornaday, Dr. Merriam, Mr. Brewster or some other naturalist be appointed to advise the committee about the natural history facts which should be considered.

I believe a law can be drawn which will prove satisfactory to all of these classes and which will be beneficial to the people who wish to see cheap game in the markets. I am sure that a law which is satisfactory to all classes will remain permanent and that it will be in pleasing contrast to the ever-changing and ridiculous game laws which are annually placed on the books and which consume from one-tenth to about one-third of the time of the legislative assemblies.

THE BREEDING OF GRAIN SORGHUMS.

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STATUS OF THE SPECIES.

Present View.—It is now generally acknowledged that all the numerous cultivated varieties of sorghum belong to a single subspecies, *sativus* Hackel. It is further held that they have been derived in the lapse of centuries from somewhat parallel variations in the spontaneous subspecies, *halepensis* (L.) Hackel, represented in this country by the well-known Johnson grass of the South. These two subspecies together comprise the species *Andropogon sorghum*. This opinion forms, as it were, the apex of a nomenclatorial pyramid of widely differing views.

Progressive Development of this Idea.—About a century and a half has elapsed since the adoption of the binomial system of botanical nomenclature. In that period four distinct conceptions of the botanical status of the numerous wild and cultivated forms of sorghum have been held. These four ideas were developed in somewhat definite succession, though their periods of dominance overlapped. In them sorghum forms have been regarded as: (a) Distinct botanical species;