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women and old men of France have worked like Trojans, have decreased to a most alarming extent since the men left for the front. The crops of Canada would show an even worse condition if all the men were taken. At last the farmer is assured that some satisfactory help will be left him. Now is the time to do the planning to make the best of it. As during the last years, let us plan to make every hour count in food production. Labor is already inadequate, and each man must be used to best advantage.

Nature's Diary.

A. B. KLUGH, M. A.

Birds exhibit in their bodily structure many very interesting adaptations, and one of the most interesting of these is the conformation of the bill. Beebe puts the matter very nicely when he says, "Tie a man's hands and arms behind his back, stand him on his feet, and tell him that he must hereafter find and prepare his food, build his house, defend himself from his enemies and perform all the business of life in such a position and what a pitiable object he would present! Yet this is not unlike what birds have to do, and it is made possible, and chiefly executed, by one small portion of the bird—its bill."

The finding and securing of food being the most important problem which birds have to solve for themselves, it is for these purposes that we find bills most adapted. This is so universally the case that we may often judge accurately the kind of food of a certain bird from a glance at its bill.

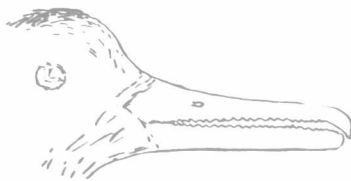
If we look at the bill of a Merganser we notice that it is toothed along the inner edges of the mandibles, (See Fig. 1) in a manner which gives these ducks their common name of "Sawbills", and we find that the Mergansers feed exclusively on fish. They carry with them a very efficient pair of "fish tongs". Now if we look at the bill of some other kind of duck, one such as the Mallard or the Black Duck, which is given to feeding on small creatures which it finds in the mud at the bottom of the water, we see that the bill is fashioned like a combination of scoop and strainer, so that a bill-full of mud may be scooped up, the semi-liquid mud allowed to run out, and the organisms retained and swallowed.

The Avocet, a bird of the sloughs of the West, has a very efficient probe with which it can seek out worms and snails concealed in crevices, in its recurved bill (See Fig. 2).

The Woodcock also probes for its food, but it does so, not in the water, but in wet soil. Its bill is remarkable in that the tip of the upper mandible, is very pliable and sensitive, so much so that the end third of this mandible can be freely moved while the inner two-thirds of the mandibles remain closed. In this way the Woodcock can feel for the food which it cannot see, can seize the organism and draw it forth.

The bill of the Skimmer, a marine species which is common off the coast of the southern States, and which is occasionally seen off the coast of Nova Scotia, is remarkable in that the lower mandible projects considerably beyond the upper one. Both mandibles are as thin and pliable as paper-knives. This peculiar form of bill is an adaptation to a unique method of obtaining food. The strong wings of this species enable it to fly very close to the surface of the water, so close in fact that the lower mandible dips below the surface, thus ploughing a furrow and catching up any animals which chance to be floating on the water.

In the Hawks and Owls we find a bill admirably adapted for tearing flesh, and in the Shrikes, though they belong to an entirely different order we find a bill much like that of a bird of prey and we notice that these birds are likewise given to feeding on birds and small mammals.



Bill of Merganser.



Bill of Avocet.



Bill of Skimmer.

Bill of Crossbill.

Among the Sparrows and Finches we see a heavy bill, adapted for crushing seeds, a form of bill which reaches its highest development in the Evening Grosbeak in which species the bill is strong enough to crack even such hard objects as cherry stones.

The bill of the Crossbills, (See Fig. 4) is decidedly unique, but it is a very useful implement for extracting the seeds from between the tight scales of the cones of evergreens upon which the Crossbills mainly feed.

The stout, straight bill of the Woodpeckers is a most efficient "pick-axe" and enables these birds to gain entrance to the burrows of the wood-boring larvæ upon which they feed.

These are a few examples of bill-adaptations and the reader can, by observation, find many more for himself.

Government by the People.

BY ALLAN MCDIARMID.

We hear a good deal these days about the lessons that have been taught by the war, but there is one of which very little mention has been made, and which has, I think, been plainly demonstrated, and that is that a great part of the world is not yet ready for self-government. It may be all right to "make the world safe for Democracy", but it's a pretty evident thing that Democracy wouldn't yet be safe for all the world. Of course the outstanding proof of this statement, just at present, is Russia. We can all see now that Russia would have been better off if she had kept her Czar a few years longer, or until the mass of her people had acquired a hazy idea of the elements of self-government. Russia reminds us of a rooster that has lost his head by the old-fashioned block and axe method, but is still flying here and there without either aim or understanding. That is what Democracy amounts to for some people and some nations.

But certain things have happened in this country lately that show us we don't need to go as far as Russia for peculiar methods of government. "By the people." The thing to which I refer particularly is the "Exemption Court" system which has been in operation throughout this country for the past few weeks. Men taken from "the people" were appointed as judges for these courts, although they gave no evidence of having the "judicial temperament" or any other particular qualifications for the position. A review of their work and the decisions they have given on the cases tried by them up to the present go to show that if our rulers and judges are to be taken from the rank and file of the nation, then the rank and file must be educated. It will be necessary to give a couple of examples to prove our point. It is evident to anyone who understands the situation at the present time that the cheese industry is one of the important branches of agriculture, supplying as it does one of the most compact, nourishing and altogether valuable foods that this country has for export to the seat of war. Nothing else can quite take its place. But at some of our tribunals cheesemakers have not been granted exemption, although there is already

too few of them in this province, and it was with difficulty that some factories secured their makers last year. Here is what happened at one court. A young cheesemaker just two days past the minimum age fixed by the government, applied for exemption. He had made as high as eighty-five cheese a week during the past summer and had done it alone, owing to the scarcity of help. His employers wanted him back next year, as his work had been satisfactory. Moreover he already had a brother in the trenches in France. When he protested at the judge's decision to refuse him exemption, saying that the farmers needed the cheesemakers, the judge replied that the farmers could keep more pigs and get rid of their milk that way.

Now for the second case. At a tribunal not twenty miles from the one already mentioned a young man applied for exemption. He owned a small general store at a country cross-roads which was looked after by his sister. His own occupation would be pretty hard to define, but he could be spoken of, probably, as a furnisher of supplies for the wet-goods department of his dry-goods store. The community being one where this was contrary to law and the occupation consequently a hazardous and somewhat strenuous one, the judge of the court was moved to grant him exemption. His business was evidently looked upon as a necessary one, as a number of the young men of the place were dependent on him for their regular supplies. At any rate his invaluable services are no longer in danger of being lost to his native land. He stays at home while the cheesemaker who last summer sent across some seventy tons of food supplies is conscripted and becomes a consumer at a time when it is admitted to be of the greatest importance that we have at least a fair proportion of producers.

This question of who should do our fighting for us ought to be decided by some hard and fast rule and then no unfairness or favors could be handed out to any man. If the law provided that the producer of certain war-time necessities should be exempt from service in the army, then the duty of the exemption court officers would be clear and their feelings or private opinions would not be consulted, as they evidently are at present. As it is at present a judge of an exemption court would need to be a Solomon for wisdom and a Lincoln for honesty of purpose to have any hope of dealing out justice to all comers. If this war is to bring us any compensation for all it is costing us it will be by increasing human efficiency and making either a worker or a fighter out of every man who has the necessary strength of mind and body. So it seems to me little short of a crime that men who are, in plain words, too lazy to earn their salt, should be allowed to remain in this country when they might be doing a man's work at the front; and at the same time have our government sending across men that could and would be doing ten times as much for the cause if they had been kept at home. If we are to have selective conscription let it be selective in every sense of the word and take those that are not in the vitally necessary occupations. If we neglect to draw this line of distinction the chances are that after a certain point every man we send over to France will go at the risk of being starved through our inability to send him food. "There's no money in that."

THE HORSE.

Docking Horses.

EDITOR "THE FARMER'S ADVOCATE":

Docking horses has in many localities in Ontario become a common custom, especially in the heavy breeds, and its practice should be discouraged especially when done indiscriminately. It is up to the practicing veterinarians as well as the judges at the fall fairs to do all they can to discourage the practice. It is not only cruel but absolutely foolish. How often in the hot summer months do we see, in going through the rural districts, the farm horses, colts as well as the work horses, standing under a shade tree doing all in their power to protect themselves from the flies and their only weapon is their muzzle, the tail being docked so short that they cannot reach to the external angle of the ilium, and where is the advantage? Of course, we are told that the tail can be done up much neater which adds to the appearance of the animal. Now, even if this is the case it is only a fad which the people have become accustomed to, and the undocked horse appears to be out of fashion, but let us see. Take for example men's suits, go back ten years and we have the full peg trousers, the wide padded shoulders in the coats, etc., and a man who didn't have such a suit was considered poorly dressed, but now let a man go to a tailor and order a suit as above mentioned and walk down a street in town and who would consider him well dressed, why? For the simple reason that fashion has changed and we are taught to think the other extreme is the smarter appearance. If you have a colt you are contemplating having docked this winter reconsider the matter, and unless the dock is crooked or some other good reason exists, just leave the colt as nature has created him, as you cannot improve on nature, also for the sake of those who think that an article such as this is written by some city man who doesn't know anything about a horse, I will mention the fact that I am a veterinary surgeon practicing in a rural district where the Clydesdale is the predominating breed, and I am doing all I can to discourage docking unless some good reason exists for doing so, and I have reached this conclusion after docking a good many horses and watching the results. I will admit the operation in itself is not particularly painful if done by a qualified man. It is very simple to inject a local anesthetic along the coccygeal nerves and the