

The Farmer's Advocate and Home Magazine.

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organization will assist the farmer, for the individual does not often care to bear the expense of an educational campaign in the interest of all. Local associations in the neighborhood of towns and cities could protect the producer, and many of them do, by giving out useful information concerning the cost of production, what the producer actually receives and what it costs to distribute the milk.

The majority of urban dwellers seem willing to pay any price for a manufactured article and say it is "on account of the war," but farm products they too often think are brought forth with little trouble and no expense and should sell at old-time prices. This fallacy will have to be combatted through the coming years, and only through union will the producers be able to demand their rights.

Nature's Diary.

BY A. B. KLUGH, M.A.

Peat.—(Continued).

All the plants of the zones which we mentioned in our preceding article add to the bottom from which they have grown at least a part of the tissues they have built up by their life-processes. The more highly organized plants in sinking carry with them numerous attached algae and other organisms and fine sediments, and by so much increase the total deposit.

By this constant accretion of dead tissues the bottom on which any group of plants has established itself is built up, thus rendering the water shallower and giving the more shoreward types of plants an opportunity to occupy the territory thus made available to them. Each plant-zone makes its advance in order from the older to the new position. But as the shoreward zones are more densely populated than the zones of deeper water, and as the plants forming them are more abundantly supplied with firm, tough tissues, the upbuilding goes on more rapidly in shallow water. Because of these facts a tendency develops for the deep-water zones to become narrow as the slope of the deposit becomes steeper. This tendency is checked to a certain extent by the spreading out of the accumulations of the shoal-water zones. Winds and currents act in spreading these accumulations after they have been loosened by wave-action. In consequence the deposits are finally built up near enough to the surface to be covered by the turf-forming plants. These are quick to occupy any areas of the bottom which approach the surface of the water, and prevent further disturbance of the surface of the deposit by holding the material firmly in place, so that from the time they gain root-hold the growth of the

deposit goes on steadily until its surface is raised above the level of the water. This process goes on until the lake is finally converted into a marsh, and the basin is completely filled by the peaty remains of the plants which have flourished in it.

As soon as a sedge mat is established certain shrubs, such as the Leather-leaf, Labrador Tea, Andromeda, Lamb-kill, Shrubby St. John's-wort, Sweet Gale, and species of willows come in and with them comes the Sphagnum, or Peat-moss. Sphagnum is the large, grayish-green moss, often tinged with pink occurring so commonly in bogs. Several species are found in Canada. The plants grow continually at the top and die below. It is limited in its upward growth by the height to which water will rise above the general level through the spongy mass below the living tips. If the water-level remains constant this height is seldom more than three feet, but if the water-level rises with the upgrowth of the peat the bed of Sphagnum may become many feet in thickness.

The peat-bog is next invaded by certain species of coniferous trees, the Tamarac and Black Spruce being the commonest and most characteristic species. These trees, like all the other plants which have successively occupied the old lake basin, first appear at the margin and gradually spread towards the centre as the peat bed becomes firmer over its entire area. When these trees have become established over the whole area, and deciduous trees or other coniferous trees, begin to come in at the margins the area has passed over from the bog stage to the forest stage and is no longer workable as a peat deposit. When the area is at the acme of the bog stage, that is when the Sphagnum is well developed but the trees have not yet invaded the area to any appreciable extent, it is a very interesting habitat botanically. Here is the home of many species of Orchids, of the Pitcher-plant, the Sun-dew, numerous shrubs of the Heath Family with very showy flowers, such as Kalmia and, in the Maritime Provinces, Rhodora.

So far we have considered only the formation of peat in lake basins, and obviously the method is somewhat different in the case of extensive flat areas. Such flat areas are plains, plateaus, valley floors, flood-plains and other poorly-drained types of country, on which the water-level is at or near the surface for the greater part of the time and the soil below is saturated. In this case we naturally have none of the strictly aquatic plants present, neither have we the zonal arrangement so conspicuous in the case of lake basins. The plant types most commonly found in these places are grass-like in form. They have long, slender leaves and weak aerial stems that die down to the ground at the end of the growing season. Many of them have horizontal, underground stems that persist for several years, and from these grow great numbers of long, thread-like much-branched roots, that penetrate the soil for considerable distances, and form a very compact, tough turf. The aerial parts falling to the ground at the end of the growing season decay and become incorporated in the turf and thus peat formation begins. The commencement of peat formation introduces other factors into the area, because the structure and composition of the soil are changed, its wetness increased, and certain products of growth and decay are introduced into it. The soil water is increased because the decaying vegetable matter and the peat act like a sponge, holding the water absorbed by them. They also clog up small drainage channels, and thus hinder the run-off. In this manner the area remains wet, only those kinds of plants which can endure such condition persist, and they go on indefinitely adding to the accumulation of peat.

(To be continued.)

Disposing of the Kaiser.

BY SANDY FRASER.

Generally about this time of year my niece Jennie comes along to spend a couple o' weeks or so wi' me an' the auld wumman, "for a change an' a rest an' a chance to talk," as she says. She's workin' in an office in the city for some big business concern, is Jennie, and maist o' the time she has to keep quiet an' behave hersel', which must come pretty hard on her, as ye would ken gin ye were as weel acquainted wi' her as I am. It's little good I get oot o' the papers, or any ither readin' matter that comes tae the hoose, while she's around, I can tell ye that. Hooever, as Jean says, maybe it winna hurt me to ease up on my readin' a wee bit noo that the war is over an' there's naething to dae but pick up the pieces. "They can perhaps dae that wi'oot your help, Sandy," says she.

And Jennie wis about as guid at rubbin' it in as her auntie. Pretty near the first thing she said was "Weel, Uncle Sandy, I see you're back frae the war. And wi'oot a scratch either. How did you come tae get off sae easily?" "Oh, I dinna go across after all," I replied. "Juist as soon as the Kaiser heard I wis thinkin' o' comin' he says tae Hindenburg, 'we might as weel quit,' says he, and they quit. Sae that's how I wis prevented takin' a mair active part in ony o' the engagements and am here 'wi'oot a scratch,' as ye say. But here Jean butted in. 'I'll tell ye why he didna get across tae France, Jennie,' says she. 'The Government wouldn't tak' him because they kenned that it wad never pay them to ship him across and then have to keep sendin' him food-supplies, and them as scarce o' ships as they were. Like some ither things, yer uncle's appetite improves wi' age,' concluded Jean.

I said naething, knowing that I wad get the worst

o' it under the circumstances, and after a meenute Jennie says, "Weel, onyway, Uncle Sandy, ye might tell us what ye are gaein' to dae wi' the auld Kaiser noo that he's doon an' oot an' waitin' tae be disposed of in some way. It's cruel tae keep him in suspense ony longer than ye can help," says she.

"It's a subject that I hae given considerable thought to," I replied, "For his ain good and as an example tae ither that might be inclined tae follow in his footsteps, he ought tae be punished. But sae far as satisfying ony personal grudge against the auld chap is concerned, I kind o' think I'd let him off. Ye maun mak' some allowance for the kind o' a bringin' up he had. There are lots o' chaps oot o' jail that are juist as headstrong as the Kaiser and gin they had had his chance would hae been as bad or maybe worse. None o' us ken how far we wad go gin there wis naething tae stop us. I dinna think ower muckle o' the auld fellow, I want ye to understand that," I went on, "and that's the reason I'd hate to mak' a martyr oot o' him. He doesna deserve tae be promoted intae that class. And gin we shoot him or hang him there will be millions o' people that will be makin' a saint oot o' him an' in a few years be sayin' their prayers to him, maybe. To my way o' thinkin' he should be taken awa' to some desert island and left there tae scratch for himsel', like auld Robinson Crusoe. He'd hae plenty chance tae think about his past foolishness an' to mak' up his mind on a different course o' action for the next round, whenever or wherever that might be."

"Wouldn't you let his wife go with him?" says Jennie, lookin' up.

"Noo Jennie," I replied, "did I no' say that I wouldn't mak' a martyr oot o' him? There's a limit tae punishment even wi' the worst o' criminals."

Jean sniffed at this an' started to say something but Jennie laughed and says shé, "I hae been readin' lately about the auld Spanish Inquisition, Uncle Sandy, and if ye werna minded to be sae easy on yer friend William, I could gie ye some pointers aboot disposing of him. There wis one machine they had for lettin' water fall on a man's head, a drop at a time, and although you might not think this wis much o' a punishment, still they say that it wis the worst o' their mony inventions. It wad mak' a mon go back on his religion or even his political party, when onything else wad be wi'oot effect. I wis thinkin' it might be a'right to gie the Kaiser a little o' that," says Jennie, wi' a wink at Jean that she didna think I could catch.

"I haven't much faith in yer water-cure," I said, "but gin ye're bound to try it on him I have no doot he wad prefer it that way than to be compelled tae drink it. That's one thing they say a German will not dae, drink plain water."

"Anither think those Spaniards had wis a machine they could fasten a man to and then by turnin' a crank they could juist pull him to pieces."

"No use," I says, "the Kaiser has been pulled to pieces mony a time in the last four years, and he's able to go some yet." "Now na mair o' yer far-fetched jokes," says Jennie, shakin' her fist at me. "This is a serious business and ye want to gie it yer best thought. If ye dinna want to hang the ex-emperor up by the thumbs or even to try the effect o' a gas-bomb on him ye've got tae think up something else. We canna go on havin' the business o' the world held up like this, wi' everybody wantin' to ken what's tae be done wi' the Kaiser an' refusin' tae go on wi' their wark till they find oot."

"Weel, I'll tell ye what I think we'd better dae wi' him, since ye dinna like my idea o' turnin' him oot tae pasture on a desert island. I think we'll hire him oot to dae the chores on some guid-sized farm where they keep a lot o' cows, say between thirty and forty. I'm willin' tae admit that the auld fellow has never done much to pay for the first-class board he's been gettin' all his life, that is, in the shape o' real doon-right hard labor. Workin' wi' his hands the same as his betters. And seein' he's made a mess o' the Kaiser job, it's my idea that it wad be na mair than fair an' square tae pit him doon a few rounds on the ladder an' let him begin over again at the point where a guid mony o' us had to mak' oor start, and where some o' us bid fair tae see oor finish as weel. I'd like tae see him cleanin' oot the stables on that farm I mentioned, for one thing. I'd give him that auld wheelbarrow o' mine wi' the twisted wheel in it an' let him gae to it. Sunday an' Monday an' ilka ither day frae November till May. And when, besides this, he had attended tae the feeding an' waterin' an' milkin' o' those coos o' his, and paid his respects tae the seven or eight head o' horses an' ministered tae the wants o' the pigs an' the calves an' the hens, and finally got time to see about the wood an' water that he had been asked to carry into the hoose, then I'm thinkin' he'd be ready to 'hit the hay,' as that last man we had used to say, and if he ever thought o' startin' up anither war or lookin' for ony trouble o' that kind, it wad be in his dreams, and likely he'd pretty soon even quit dreamin' about it."

"Sae there ye have my scheme," I concluded. "There's na better medicine than Hard Labor for nine-tenths o' the ills that Humanity is subject to. It's the punishment an' the cure mixed up in the one bottle and mony's the man I ken that wad hae gone tae the bad gin he hadna been where he wis under the necessity o' takin' a guid heavy dose o' it."

"Weel," says Jennie, jumpin' up an' startin' for the kitchen, "I guess that's a hint for me to go and help auntie get the supper. But I'll leave it to the Kaiser himsel' if you're not harder on him, after a', than I wis gaein' tae be. I'm sure he'd just as soon stand up an' be shot as sit doon an' try to milk that brindle heifer you let me experiment on last summer when I wis here. She might hae just killed me," says Jennie, unco' sober like, as she went oot o' the room.