places have not reverted to swamp timber. The ground is too dry, the hardwood thickets have come to stay. These things are well known, especially to the woodsmen of the region; they are in all cases referred to the removal of timber, and there is probably no locality in the world where this subject could better be studied than in North Wisconsin. A drive with some old resident through the settled parts of Shawano, Marathon, Taylor, and other counties and the rehearsal of his memories present matters of the utmost interest in this connection, and will hardly fail to convince even the most skeptical of the decided changes in drainage and soil moisture which have occurred here and are still in progress.

THE OUTLOOK FOR THE FUTURE.

It is impossible to foretell how long the pine is likely to last. As stumpage increases in price and the opportunity to buy it decreases, one mill after another drops out. Half the mills of 20 years ago are no longer in existence, not because they failed to pay but because their pine supplies gave out, and this same process will continue. The output, already on the decline, will grow smaller, and the exploitation of the 17 billion feet of standing timber is likely to be drawn out over a period far greater than would seem possible with the present rate of cutting. Nevertheless, the experience of parts of Michigan and also of Wood, Portage, and other counties in Wisconsin indicate that cutting will go on without regard to the end, and its rate depends merely on considerations of market conditions and facilities for handling timber, so that the end of the greater part of pine lumbering is likely to be quite sudden, and its effect correspondingly severe.

The cut of hemlock, though still small, may at any time take on considerable dimensions. There are several good reasons which make this desirable. The wood is much better than is commonly assumed, and it is mere prejudice—and more the prejudice of the carpenter than of the consumer—which prefers poor pine to good hemlock. For some time the old hem-
lock has been dying out quite rapidly in most parts of this area; this process will certainly continue and unless the old stands are cut, much valuable material will be lost.

Hardwood lumbering will continue for a long time, though probably at a very variable rate. As things are now, the present cut of 4–500 million feet per year can be continued for more than 50 years unless settlement and consequent clearing should progress at a very unusual pace.

The outlook for the forest itself has been indicated in the preceding. The hardwood forest is being reduced by logging and clearing, the pineries are disappearing and fires assist the destruction of both besides burning out the swamps.

As pointed out, both white and red (Norway) pine are perfectly capable not only of continuing as forests but of reclothing the old slashings, but are generally prevented from doing so by fire.

The hemlock is in a process of natural degeneration and even the hardwoods, though thrifty and intact as forests, seem to fail on most cut-over lands wherever fire has run. Thus about 60 per cent. of the burned over lands are today devoid of any valuable growing timber; producing firewood at best. Another 40 per cent. of the 8 million acres of cut-over lands are entirely bare. And this unproductive area is rapidly increasing in extent under present methods.

Counting that 100 feet B. M. could be grown as the possible annual increment per acre on lands which are left entirely without care, save the protection against fire, the State of Wisconsin loses by this condition of affairs a round 800 million feet B. M. of a marketable and much needed material. This loss is primarily a communal loss, a damage to county and state, for the individual owner does not suffer; the land is bought for the timber and when this is cut the land is only held if it appears that a low tax assessment and opportunities to sell, etc., will promise more profit in holding than in abandoning it.