

BACK TO THE ROCKS.

(By CAPTAIN E. V. SANDERSON.)

In an instructive lecture delivered by Mr. B. C. Aston, President of the New Zealand Institute, at the annual meeting of the Wellington Horticultural Society, it was demonstrated how our forests developed upon the rock and pumice formation which at some remote period constituted the surface of this country. Initially moss-like growths, *raoulia* and such like obtained a footing depositing a modicum of humus as they lived and died. Thus were conditions prepared which were suitable for something of a sturdier growth such as *tutu*, *wineberry*, and other humus forming shrubs, while these in their turn prepared the soil for *pohutukawas*, *manuka*, *tawhero*, etc., and they in their turn deposited humus and eventually the forest was formed as we found it when our pioneers landed.

There is, however, a further aspect of the position when we come to consider how much of this humus-forming forest has been needlessly destroyed on the highlands which cannot continue to support pastoral industry beyond one or two generations, and add to this the ever-increasing destruction of the forests on our backbone ranges by plant-eating animals. Immediately these forests are sufficiently damaged or destroyed, surface erosion of the top soil sets in, and be it remembered that this top soil is rarely of any appreciable depth. Following upon this, the sub-soil, loose stones and debris come down choking rivers and causing devastation and floods in our lowland agricultural lands. So the process goes on, if unchecked, eventually assuming such proportions that checking is beyond human power. Then, indeed, erosion has assumed the mastery. Rocks begin to show up on the mountain and hill tops, then later on the lower spurs, and eventually in the gullies, all the time spreading the debris over our once fertile lands lower down. Thus, in a country like New Zealand, where by far the larger proportion of our land is hill and mountain country, we are working back to the original rocks and at the same time forming other lands under the sea. All this is, however, nothing new. Plato warned us about 400 B.C., when writing of Attica which forms the eastern part of Greece, a country which has long since passed the heyday of its prosperity and where a once noble race ekes out a meagre existence. Apparently, however, the effect of forest depletion still goes unheeded in New Zealand. The following is the translation of Plato's words by Arnold J. Toynbee:—Contemporary Attica may accurately be described as a mere relic of the original