

APPENDIX A

NOTE ON THE OCCURRENCE OF TAUPO PUMICE IN THE
HAMILTON BASIN

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The presence of a thin layer of pumice lapilli and ash close to the surface of the Rukuhia and Moanatuatua peat bogs was recorded by Grange and Taylor (1939). Since this time a similar band of pumice has been noted in many of the other peat areas in the Hamilton basin. In the undeveloped fibrous peats of the Woodlands bog a layer of pumice lapilli 2 to 3 inches thick occurs at a depth of 18 to 20 inches from the surface. This is similar to the observations of Grange and Taylor. In the more loamy peats the pumice layer is predominantly fine ash and any lapilli present are extremely weathered and crush easily. In the fibrous peats it is thought that the fine ash that fell on the bog surface soon dispersed in the loose network of dead material, whereas the lapilli were of sufficient size to be trapped. In the loamy peats more active weathering took place in an acid environment as the organic matter was breaking down. This made the lapilli very fragile, so with drainage and compaction of the peat the lapilli were very soon crushed to fine ash size.

The thickness of the pumice layer varies from $\frac{1}{2}$ to 4 inches. The thinnest deposits can be accounted for by dispersal of the fine ash in the peat. The thick deposits are often layered, suggesting that they contain some ash washed off the hills that surround the peat bogs. A minimum thickness of 2 inches is suggested by a layer of pumice ash interbedded with sediments on the floor of drained, Lake Tunawhakapeka, 6 miles north of Hamilton. At the time of the Taupo eruption this lake was an extensive body of shallow water into which the ash fell. The finer material sank, giving rise to a uniform layer of ash over the floor of the lake. Presumably the vesicular lapilli floated off to the side of the lake as none have been observed in the deposit on the lake floor. (see Figure following)

Reference

- Grange L. I. and Taylor N. H., 1939: Soils and Agriculture of Part of Waipa County.
N.Z. Dep. Sci. Indust. Res. Bull. 76.

