in a locality become susceptible to them at about the same time. Drought, windthrow, and severe root upsets such as occur during serious earthquakes, floods and logging, are therefore most likely to be important to the development of beech buprestid outbreaks. The overmaturity of many trees in a locality may also give rise to larger numbers of buprestids, though all such susceptible trees do not appear to be attacked in the same year, some trees of apparently low vigour escaping severe attack for several years.

Root damage during logging often results in serious root rot. Parasitic attack by *Armillaria mellea* (Vahl) Sacc. has been recorded on red beech (Gilmour, 1955) and some trees so attacked have been found successfully attacked by *N. enysi*. Root and butt rots by various Polyporaceae have also been found associated with successful *N. enysi* attack, the presence of these fungi usually being a sign of earlier wind damage or overmaturity in the trees concerned. However, cases of trees with severe root damage and no *N. enysi* attack are also found. Records of patch-kill of the bark of trees, such patches producing buprestid adults without killing the tree, have also been obtained.

Site also appears to affect tree susceptibility in some areas, and is therefore important in the development of buprestid outbreaks. The gravelly soils of the Maruia and other West Coast river terraces are notably unstable during floods and earthquakes such as the Murchison earthquake of 1929. Root troubles in the beech forests occurred following this earthquake and many trees died as a result of attacks by *N. enysi*. An outbreak lasting several years followed, and evidence of the progressive insect attack and the resultant tree mortality could still be seen there in 1958. There are inherent features in the host trees, such as shallow rooting systems associated with light crowns, which may render them susceptible to buprestid attack, particularly in soil likely to dry rapidly during short droughts, or scour badly during floods. Two of the host species (*N. fusca* and *N. truncata*) appear to be more susceptible than the other three to upsets in their economy caused by droughts, floods, scale insect attack or other such influence. *N. menziesii* appears to be the least susceptible. The beech buprestid has been found successfully attacking trees with roots exposed by flooded creeks. It has also been associated with the death of trees which were heavily attacked by *Coelostomidia pilosa* Mask. Wind-damaged and windthrown trees are also heavily attacked by *N. enysi*. The Hochstetter outbreak was caused by wind-throw. The success of attack by *Nascioides enysi* on beech trees appears to depend on which tree species is susceptible to attack at the time when the second larval instar of the beetle is developing. Where a majority of the trees of a locality is susceptible, tree mortality appears to be more or less in proportion to the numbers of each species present. Initially, however, red beech and hard beech may succumb in greater numbers, due to their apparent greater susceptibility to upsets in their economy. Just after the cambium of an infested tree is extensively damaged, the foliage yellows, and then turns brown. These dead leaves may be still on the tree when the beetles emerge but fall in the following autumn. Because trees are not always killed by *Nascioides* immediately following attack, living trees sometimes have beetle exit holes in the bark. Such trees often die as a result of further attack the next year.

II. POSSIBLE CONTROL MEASURES FOR *N. enysi*

Silvicultural Control:

Several factors contributing to increases in numbers of *N. enysi* may, by silvicultural techniques, be manipulated to reduce their effect. For example, there is a strong case for clear-felling any stand which is obviously prone to windthrow, followed by an effort to develop wind-firmness in the succeeding crop.