

**ON THE ECOLOGY AND DEMOGRAPHY OF A TERRESTRIAL
POPULATION OF ASPLENIUM TRICHOMANES (ASPLENIACEAE:
PTERIDOPHYTA) IN THE NETHERLANDS**

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ABSTRACT

In the 19th century and the first half of the 20th century, terrestrial growth of *Asplenium trichomanes* L. was mostly confined to the southern part of Limburg. Today terrestrial growth is almost confined to the Kuinderbos, a planted wood in one of the reclaimed polders of the former Zuiderzee. The first plants established 20 - 25 years after tree planting. The preference for *Picea sitchensis* stands and a northeast exposure has not changed over 25 years. Two subpopulations have been monitored since 1988/1991. One of these subpopulations decreased in size due to overgrowth by herbs and *Rubus* spp., the other subpopulation increased after repeated thinning of the tree stand. The fern plants appeared to be fertile at an age of three to seven years. Mortality was highest in the juvenile phase. On average, plants died at six years old, though the oldest plant is more than 25 years old. Careful management of the *Picea sitchensis* stands is advised because with too much incoming light *A. trichomanes* plants will be out-competed by other species of the herb layer. Results of long-term monitoring of three populations (Utrecht, Amsterdam and Kuinderbos) were analysed. A negative effect of severe winters was evident.