



SDI FINAL EVALUATION FORM 1.1

PART 1:

Journal Name:	Journal of Agriculture and Ecology Research International
Manuscript Number:	Ms_JAERI_30488
Title of the Manuscript:	Effects of forest succession on the occurrence of two orchid species on Terschelling the Netherlands
New Title:	Effects of forest succession on the occurrence of orchid species
Type of the Article:	Original Research Article

PART 2:

FINAL EVALUATOR'S comments on revised paper (if any)	Authors' response to final evaluator's comments
The paper is interesting and detailed. The authors use a variety of methods to convincingly make their case! Excellent work. I will say that the English still needs some work and below I have edited the Abstract. However, the manuscript can certainly be understood as it is now. ABSTRACT The <i>orchid</i> species, <i>Neottia cordata</i> and <i>Goodyera repens</i>, are found in large parts of Europe and North America but rarely in the Netherlands. Hence, the Forestry Services of Netherlands is working to preserve these endangered orchid species by maintaining the current forest structure and applying different forest management strategies. The aim of this study were, (1) to identify environmental factors which determine the occurrence of the two orchid species, (2) to recommend management options to preserve identified suitable environmental factors in mixed and coniferous forests. In Hoornsebos, Netherlands, we recorded vegetation composition, forest structure and composition, humus and litter layer, and canopy openness in xx plots. In the study forest, we identified two plant communities (Vaccinio-Piceetalia and Quercetalia-roboris). Both <i>N. cordata</i> and <i>G. repens</i> were abundant in Vaccinio-Piceetalia plant community, but were rare in the Quercetalia-roboris plant community. Our results showed that both orchids' species are dependent on the occurrence of needle litter and need to grow in a low productivity environment where they are not outcompeted by other plants. There is also a general trend of development towards more broadleaved tree composition which has a negative effect on the occurrence of both orchid species. Likewise, the development of a shrub layer leads to increased	



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shading and canopy closure and is likely to decrease the abundance of *N. cordata* in the study forest. Aging of coniferous forests will lead to further build-up of the litter layer which negatively affects *G. repens*. Without good forest management, the existing suitable environmental conditions for both *G. repens* and *N. cordata* will likely degrade, thus active management is required for sustainable conservation of these orchid species.

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