

Zeitschrift: Berichte des Geobotanischen Institutes der Eidg. Techn. Hochschule, Stiftung Rübel

Herausgeber: Geobotanisches Institut der Eidg. Techn. Hochschule, Stiftung Rübel

Band: 55 (1989)

Artikel: Studies on competition between closely related species of *Scabiosa columbaria* L.s.l. Part 2. Differentiation of hybrid populations under different temperature, water and nutrient conditions = Konkurrenzuntersuchungen zwischen nah verwandten Arten von *Scabiosa columbaria* L.s.l. : Teil II. Differenzierung von Bastardpopulationen unter verschiedenen Temperatur-, Feuchtigkeits- und ...

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Kapitel: 1: Introduction

DOI: <https://doi.org/10.5169/seals-377754>

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1. INTRODUCTION

In the winter of 1966/1967, a study was started at the Geobotanical Institute ETHZ (SFIT) in Zürich on the evolution of closely related species of *Scabiosa columbaria* s.l. under different temperature, fertilization and water conditions. The intention was to follow up the morphological differentiation of populations grown under different conditions as a result of free crossing between the different species. The question was, if for each condition tested a population with specific properties would develop.

After four years the first part of the investigations dealing with the response of the pure species to different conditions was completed and the results published (LANDOLT et al. 1975). The study of the greenhouse containers was discontinued in 1985, and that of the plots of differing water table levels in 1983. Thus the experiments lasted for 18 and 20 years, respectively.

Acknowledgements

In the first years the investigations were assisted by F. Grossmann and M. Meyer. Later M. Porret, Th. Egloff, R. Dickenmann and M. Gasser supervised the experiments. E. Wohlmann-Bräm, the late E. Brouillet, A. Hegi and many other collaborators measured the different characteristics of the plants and took care of the cultures, C. Fornallaz made the first statistical analysis. This very valuable assistance is greatly appreciated.

We are very grateful to our colleagues K.M Urbanska and A. Gigon for constructive criticism.