

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

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

Band: 44 (1975-1976)

Artikel: Reproduction in natural triploid hybrids ($2n=24$) between *Cardamine rivularis* Schur and *C. amara* L.

Autor: Urbanska-Worytkiewicz, Krystyna

Kapitel: 1: Introduction

DOI: <https://doi.org/10.5169/seals-377685>

Nutzungsbedingungen

Die ETH-Bibliothek ist die Anbieterin der digitalisierten Zeitschriften auf E-Periodica. Sie besitzt keine Urheberrechte an den Zeitschriften und ist nicht verantwortlich für deren Inhalte. Die Rechte liegen in der Regel bei den Herausgebern beziehungsweise den externen Rechteinhabern. Das Veröffentlichen von Bildern in Print- und Online-Publikationen sowie auf Social Media-Kanälen oder Webseiten ist nur mit vorheriger Genehmigung der Rechteinhaber erlaubt. [Mehr erfahren](#)

Conditions d'utilisation

L'ETH Library est le fournisseur des revues numérisées. Elle ne détient aucun droit d'auteur sur les revues et n'est pas responsable de leur contenu. En règle générale, les droits sont détenus par les éditeurs ou les détenteurs de droits externes. La reproduction d'images dans des publications imprimées ou en ligne ainsi que sur des canaux de médias sociaux ou des sites web n'est autorisée qu'avec l'accord préalable des détenteurs des droits. [En savoir plus](#)

Terms of use

The ETH Library is the provider of the digitised journals. It does not own any copyrights to the journals and is not responsible for their content. The rights usually lie with the publishers or the external rights holders. Publishing images in print and online publications, as well as on social media channels or websites, is only permitted with the prior consent of the rights holders. [Find out more](#)

Download PDF: 31.03.2026

ETH-Bibliothek Zürich, E-Periodica, <https://www.e-periodica.ch>

1. Introduction

Natural hybridization between *Cardamine rivularis* and *C. amara* in a subalpine station at Urnerboden (Central Switzerland) was first noted in 1971. A general morphology and chromosome numbers of both parent species as well as the hybrids were then studied. It was found that the hybrids represented a triploid level ($2n=24$) although both their parent species were diploid with $2n=16$. Differences in chromosome size occurring between *C. rivularis* and *C. amara* permitted to distinguish the resp. parent genomes within the triploid set: 16 chromosomes of *C. rivularis* type and 8 of *C. amara* occurred invariably in all 337 studied plants (URBANSKA-WORYTKIEWICZ and LANDOLT 1972, 1974, 1977, URBANSKA-WORYTKIEWICZ 1976, 1977b, URBANSKA-WORYTKIEWICZ unpubl.). Except for a few individuals, the 24chromosomic plant had non-dehiscent anthers or were extremely high sterile (97-98%). None the less, they indiscutably predominated within the population covering about 16 hectares.

The station at Urnerboden was often revisited during 1972-1977; in 1973, fertile hexaploid plants ($2n=48$) were found within a sector of the population (URBANSKA-WORYTKIEWICZ and LANDOLT 1974, 1977, URBANSKA-WORYTKIEWICZ 1976, 1977b).

The striking numerical supremacy of the triploids as well as the appearance of the hexaploids at Urnerboden suggested that particular mechanisms may favour the production of hybrids and their biological success. A detailed study on ecological genetics was therefore undertaken; the present paper deals with the reproduction of the 24chromosomic plants.

Acknowledgements

Mrs. A. HEGI took an exceptional care of the young experimental plants. Most of the fixations as well as the staining were made by Mrs. M. SIEGL. Photographs were taken by Mr. H. SIGG and Mrs. E. WOHLMANN-BRÄM prepared some diagrams. Sincere thanks of the author are presented to all these persons.