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THE LIFE HISTORY OF *CAREX CESPITOSA*: CONSEQUENCES FOR POPULATION DYNAMICS AND VEGETATION SUCCESSION I. TUSSOCK DEVELOPMENT IN *C. CESPITOSA*

EMILIA BRZOSKO

Abstract: The development of the *Carex cespitosa* L. tussock is itself a demographic process, because the number of shoots increases and decreases with time as ageing and dying take place. This is an important factor affecting population and community development, as well as some ecological processes, for example succession. Thus, investigation of the ontogenesis of the species and its relation to succession in abandoned meadows is very important.

Key words: growth, age, ageing, senile parts, biomass

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THE LIFE HISTORY OF *CAREX CESPITOSA*: CONSEQUENCES FOR POPULATION DYNAMICS AND VEGETATION SUCCESSION II. POPULATION STRUCTURE OF *C. CESPITOSA* DURING THE COURSE OF SUCCESSION

EMILIA BRZOSKO

Abstract: Subpopulations of *Carex cespitosa* L. growing in various conditions differed in their spatial organization, size and age structure. Values of the features analysed, considered as indicators of the vitality of a population, suggest that the meadow subpopulation was best

equipped for survival. It had the highest plant density, near optimum age structure and the highest reproductive potential, which was capable of being realized, compared with the other subpopulation. The willow subpopulation differed critically while the other two occupied intermediate position. Some features favoured the survival of the sedge subpopulation and others the *Filipendula* subpopulation.

Key words: spatial structure, size structure, age structure

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**THE LIFE HISTORY OF *CAREX CESPITOSA*: CONSEQUENCES FOR
POPULATION DYNAMICS AND VEGETATION SUCCESSION
III. REPRODUCTION OF THE *C. CESPITOSA* POPULATION**

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Abstract: Differences in the reproductive potential of *Carex cespitosa* L. should be attributed primarily to the presence of other plant species, as other factors influencing the number of propagules (for example shading) are closely connected with it. The highest values of the reproductive parameters were recorded in the meadow subpopulation of *C. cespitosa*. The greatest number of flowering and fruiting individuals, flowering and fruiting shoots and seedlings occurred in the meadow subpopulation, and least in the willow subpopulation.

Key words: abandoned meadows, flowering, fruiting, seeds, seedlings

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**THE LIFE HISTORY OF *CAREX CESPITOSA*: CONSEQUENCES FOR
POPULATION DYNAMICS AND VEGETATION SUCCESSION
IV. POPULATION DYNAMICS OF *C. CESPITOSA* IN THE PROCESS OF
SUCCESSION**

EMILIA BRZOSKO

Abstract: Populations of *Carex cespitosa* L. were present in every stage of succession which occurred in the abandoned meadows, but their incidence in the changing communities did not remain constant. During succession, changes occurred in the frequency, density and size of the population and the manner in which it occupied the area. Other features changed too such as the size structure, biomass produced and number of fertile shoots.

Key words: spatial structure, size structure, age structure, biomass

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**THE LIFE HISTORY OF *CAREX CESPITOSA*: CONSEQUENCES FOR
POPULATION DYNAMICS AND VEGETATION SUCCESSION
V. THE LIFE HISTORY AND ROLE OF A *C. CESPITOSA* POPULATION IN
THE PROCESS OF SUCCESSION ON ABANDONED MEADOWS – GENERAL
DISCUSSION**

EMILIA BRZOSKO

Abstract: *Carex cespitosa* population growing under different conditions display differences in structure, which involve almost all their characteristic features. Because of different properties of populations growing in different situations, their role in succession varies. The colonisation success and role of *C. cespitosa* population in succession is attributable to its life strategy: type of growth, manner of growth, the strong vitality of rhizomes and roots, high individual reproductivity.

Key words: life strategy, colonisation success, patterns of succession

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