



CANOPY BEHAVIOR OF THREE MILKVETCH (*ASTRAGALUS*) SPECIES IN ACCLIMATION TO A NEW HABITAT

TADEUSZ ANISZEWSKI*

*Department of Biology, University of Eastern Finland,
P.O.Box 111, 80101 Joensuu, Finland*

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Empirical data on functional growth dynamics are extremely limited for herbaceous plants and do not exist for milkvetch (*Astragalus*) species, although they are essential to an understanding a plant's ability to acclimate to a new habitat, which we need to know in order to predict its performance in future climate scenarios. The paper examines how species spread to a habitat in which they do not initially occur. It presents results on changes in growth, canopy behavior, competition ability and morphological traits of Cicer milkvetch (*Astragalus cicer* L.), Sweet milkvetch (*Astragalus glycyphyllos* L.) and Russian milkvetch (*Astragalus falcatus* Lam.) from a ten-year experiment. They successfully acclimated to a new habitat and presented clearly similar growth dynamics and similar strategies for establishing and maintaining populations. Developmental and reductional perennial phases were noted. The developmental phase showed slow and fast subphases. Canopy cover area peaked at the height of the developmental phase. Morphological parameters measured from parts of plants growing outside the experimental plot were greater than for plants growing inside it. Milkvetch species are good competitors. Unlike invasive species, their expansion strategy is not colonization-oriented. The data suggest that systematic and evolutionary studies on these species should pay attention to morphological changes.

Key words: *Astragalus*, autecology, biometrics, canopy behavior, developmental perennial phase, growth dynamics, new habitat, plant strategy, population ecology, reductional perennial phase.

e-mail: Tadeusz.Aniszewski@joensuu.fi