

Short-Term Responses of Photosystem II to Heat Stress in Cold-Acclimated Atrazine-Resistant and Susceptible Biotypes of *Erigeron canadensis* (L.)

Sándor Dulai^{a,*}, István Molnár^a, Evelin Péli^a and Endre Lehoczki^{a,b}

^a Department of Plant Physiology, Eszterházy Teachers' Training College, H-3301 Eger, POB 43, Hungary. Fax: +36-36-520466. E-mail: ds@gemini.ektf.hu

^b Department of Botany, Attila József University, H-6701 Szeged, Hungary

* Author for correspondence and reprint requests

Z. Naturforsch. **54c**, 665–670 (1999); received November 2, 1998/February 19, 1999

Erigeron canadensis, Heat Stress, Chlorophyll Fluorescence, Photosystem II, Photosynthesis

When leaves of atrazine-resistant (AR) and atrazine-sensitive (S) *Erigeron canadensis* (L.) plants grown at 5 °C were exposed to an elevated temperature (35 °C) for 30 min, the critical (T_c) and peak temperatures (T_p) of the F_0 vs. T curves were considerably higher for the leaves of the S biotype, but not for those of the AR biotype. The temperature dependences of F_v/F_m and $\Delta F/F_m'$ were not greatly different for the heat-treated cold-acclimated AR biotype, in contrast with the situation for the S plants. This short-term heat treatment resulted in a more significant shift in the optimal thermal interval of CO₂ fixation for the S than for the AR biotypes.