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SOME EFFECTS OF TEMPERATURE AND WATER STRESS ON THE FLORAL NECTAR
CHARACTERISTICS IN Ipomopsis longiflora (POLEMONIACEAE).

APPROVED:

C. Edward Fernald
W. R. S.
Richard G. Whittier
John Rye

Joseph H. Beal
Dean of the Graduate School

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ON THE FLORAL NECTAR CHARACTERISTICS IN
Ipomopsis longiflora (POLEMONIACEAE).

by

ARMANDO GERARDO VILLARREAL, M. Sc.

THESIS

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ABSTRACT

This study was conducted to determine if, under controlled conditions, floral nectar characteristics of Ipomopsis longiflora were significantly affected by temperature and water stress. Temperatures investigated were 20°C, 30°C and 35°C with three levels of water stress (low, moderate and high). Data was analyzed by 2-way ANOVA. It was found that; (1) sugar composition was affected by temperature that reduced significantly the sucrose percent at 35°C, (2) sugar concentration was not affected by temperature or water stress, (3) nectar volume was affected significantly only by water stress which reduced volume by 39.8% at a moderate water stress and 71.4% at high water stress. Flower size (corolla tube length) was affected by temperature and water stress, however, it is unknown whether the small changes in flower length are of any significance to the pollination ecology of this species.

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