



Workshop on Population Dynamics applied to Orchid Conservation

Universidad de Costa Rica, March 17-18, 2007

The 14 hour (2 day) workshop will be focused on the most recent methodology to determine the probability of persistence or extinction of a species or population in their natural habitat. The participants will learn how to collect and analyze demographic data and understand the values and limitations of the technique for biological conservation. The workshop will be offered in English, but instructors are also Spanish speakers.

The instructors will be **Prof. Pavel Kindlmann** and **Prof. Raymond L. Temblay**. **Prof. Kindlmann** is a faculty member at the University of South Bohemia in the Czech Republic. He has extensive experience in the study of population dynamics of terrestrial orchids and is an active member of the *In-situ* Conservation Committee of the Orchid Specialist Group. **Prof. Tremblay** is a Professor in the Biology Department, at the University of Puerto Rico - Humacao, and is Chair of the *In situ* Conservation Committee of the Orchid Specialist Group, IUCN/SSC.

Topics to be covered.

Introduction to population dynamics in orchids (A historical perspective)

Importance and uses of population dynamics

Theory and practical methods:

- Life Cycle diagrams and Matrix population models
- Descriptive statistics of life tables and parameter estimation
 - Observed transition frequencies
 - Age - classified
 - Stage/size- classified
 - Death
 - Mark-recapture methods
- Matrix construction and analysis

- Stable stage distribution: What should we expect if the population is stable?
 - Reproductive value: Which of the age/stage class contributes to the next generation?
 - Calculate Sensitivity and Elasticity Analysis
Perturbation analysis.
 - Calculate the confidence intervals of the following parameters:
Variation in demographic parameters because of population size
Variation caused by temporal and spatial variation
Estimating half life of a population
 - Limitation of the application and interpretation of these techniques
- Use of computer programs to analyze data sets from real orchid populations and evaluate the parameters discussed before

Interpretation and use of results for conservation biology will be emphasized

Workshop site, costs and payment forms.

The workshop will be offered on March 17-18, 2007 in Computer Lab. #8 of the Economy Faculty at the University of Costa Rica (map will be sent upon registration). Each day session will start at 9am and finish at 5pm.

The fee is \$100 and includes computer during both days, lunch and coffee breaks each day during the theory sessions. A certificate of participation will be given to those who complete the workshop.

There are two ways to pay before the workshop:

1. Check: Make check payable to: FUNDEVI - Jardín Botánico Lankester
Please remember to include your name and note it is for the Workshop, and send to: P.O.BOX 1031-7050, Cartago, Costa Rica, C.A.
2. Bank transfer (see attached information): Please send a copy of the bank transfer by email to jbl@cariari.ucr.ac.cr or faxed to (506) 552-3151.

Payment will also be accepted at the beginning of the workshop by cash or check, if there is still space available.

Please complete the confirmation form (attached) and return as soon as possible as participation is limited to 20 persons. Registration should be returned by e-mail to jbl@cariari.ucr.ac.cr or faxed to (506) 552-3151.