

HOARY CRESS BIOLOGICAL CONTROL CONSORTIUM

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CABI Bioscience Workplan and Budget 2003

Dear Hoary Cress Controllers,

The following outlines the work that CABI Bioscience has planned for the 2003 field season. Also attached is the budget. I would like to point out that the increase of required funding is largely due to the weakness of the U.S. currency and the resulting unfortunate exchange rate. As always, your suggestions and comments on the proposed work program are welcome.

The proposed work is in line with the 5-year plan put forward in 2001, the results obtained during the field season in 2002, and based on discussions with the USDA ARS EBCL. Work in 2003 would include the following elements:

TENTATIVE WORK PROGRAM CABI BIOSCIENCE 2003

1. Surveys

- Extend surveys to countries not included in 2002, i.e. Bulgaria, China, Ukraine and Serbia, and potentially southern Kazakhstan;
- Revisit selected sites sampled in 2002, i.e., Hungary, Romania, Switzerland and Germany;
- Extend surveys to include related Brassicaceae, e.g., *Lepidium latifolium* (perennial pepperweed) and *Isatis tinctoria* (Dyers woad) that grow intermixed with or adjacent to hoary cress infestations;
- Extend surveys to pathogens;
- Continue to collect plant material for taxonomic purposes (herbarium and dried leaf material in silica gel for molecular studies at USDA ARS NPARL);
- Submit refereed publication on literature and field survey of herbivores and pathogen associated with hoary cress and perennial pepperweed.

2. Investigations on the hoary cress shoot mining weevil *Ceutorhynchus merkli*

- Collect adults of *C. merkli* in Hungary in early spring;
- Continue single-choice and start sequential no-choice oviposition tests;
- Continue no-choice oviposition and larval development tests with plant species accepted for oviposition;

- Conduct single-choice or multiple-choice development tests with species that supported development under no-choice conditions, e.g. *Brassica nigra*;
 - Continue and improve rearing at Centre;
 - Start investigations on impact.
- 3. Investigations on the hoary cress root crown weevil *Ceutorhynchus cardariae***
- Check overwintering plants in early spring for feeding and oviposition;
 - Collect additional adults of *C. cardariae* in Romania in early spring;
 - Continue investigations on biology and phenology;
 - Develop methods for host-specificity screening and start preliminary tests;
 - Develop rearing methods;
 - Start investigations on the impact of *C. cardariae* in the field and/or field cages at the Centre.
- 4. Investigations on the hoary cress seed weevil *Ceutorhynchus turbatus***
- Collect adults of *C. turbatus* in Switzerland and Germany in mid May;
 - Start sequential no-choice and single-choice oviposition tests;
 - Conduct no-choice oviposition and larval development tests with plant species accepted for oviposition;
 - Improve methodology to increase oviposition of females in captivity.
- 5. Investigations on new potential biocontrol agents**
- Rear adults of *Psylliodes* sp. from plants collected in Romania;
 - Start investigations on the biology of this leaf beetle in the field and laboratory;
 - Conduct host-specificity test with a few critical test species;
 - Send *Psylliodes* specimens to taxonomists for identification;
 - Obtain gall midges *Contarinia cardariae* and *Dasineura cardariae* from Kazakhstan.
- 6. Comparative studies on *L. draba* biology and herbivory in Europe and North America (funded through U of I)**
- Conduct second season of field work on plant biology and insect feeding impact in different regions/countries than 2002;
 - Resample some of the same field sites as in 2002, especially those where potential agents were found (Hungary, Romania);
 - Include soil quality in comparison
 - Include climatic conditions in comparison.

BUDGET 2003

Projected exchange rate \$1.00U.S.=1.30SFr

	Months	\$U.S.
Staff costs		
Scientist (myself)	5	21,154
Helmut		
Masters student		U. of I. Funded
Yugoslavian scientist		
Summer student	11	18,385
Gardener	3	10,904
 Subtotal		 50,443
Travel costs and collaborators		
Airfares to and from USA		2,000
Switzerland		500
Germany		500
Hungary		500
Serbia		
Bulgaria		2,000
Romania		3,500
Ukraine		2,500
Southern Kazachstan		1,500
 Subtotal		 13,000
Other costs		
Identifications		1,500
Material and Consumables		5,500
 Subtotal		 7,000
 CABI charges @ 25%		 17,611
 TOTAL		 88,054
 Sampling of DNA material for USDA ARS NPARL		
		Likely USDA ARS NPARL funded
Scientist time	1 week	814
Summer student	1 week	404
Shipping costs		500
 Collaborators		
Bulgaria		200
China		200
Serbia		200
Ukraine (Kaukasus)		200
CABI charges @ 25%		629
 TOTAL		 3,147

Please contact me should you have any questions or suggestions regarding the work program or budget.

Sincerely,

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