

Report on trip to Russia, 1993

A. J. CAESAR

DATE: September 17, 1993

NAME AND TITLE: Anthony Caesar, Research Plant Pathologist

DUTY STATION: Bozeman, Montana

DATES OF TRAVEL: June 14, 1993 through July 10, 1993

DESTINATION: Russia, France.

PURPOSE OF TRAVEL: For the collection of plant pathogens of leafy spurge.

PARTICIPANTS: **Bob Masters**, USDA, ARS; **Anthony Caesar**, USDA, ARS; **Luca Fornasari**, Research Entomologist European Biological Control Laboratory, Montpellier France.

CONTACTS: **Victor Krivahatsky**, Entomologist, Zoological Institute, Russian Academy of Sciences, St. Petersburg; **Musa Adiloff**, Range Scientist, Agricultural Institute, Stavropol, Russian Republic; **Lloyd Knutson**, Director, European Biological Control Laboratory, USDA, ARS, Montpellier, France; **Siraj Hassan**, Plant Pathologist, CSIRO, Montpellier, France.

Highlights

The diversity of *Euphorbia* types and associated disease syndromes was quite striking in the region bordering the Caucasus mountains near Mineralnye Vody and in the Stavropol region. The initial collecting on our 1993 trip was done in this area, and subsequent travel in the Central Caucasus and along the Black Sea, where *Euphorbia stepposa* predominated, served to confirm this. Vascular diseases and an unusual swollen root syndrome were associated with chlorotic, stunted plants in this initial collecting. Unfortunately transfers of cultures made in the field were not possible until one week later when our group camped near the Agricultural Institute in Stavropol (where facilities for culturing were obtained), and it is not certain that the respective causal organisms were obtained.

Particularly noteworthy was the consistent association of *Rhizoctonia* and *Fusarium* spp. with lower vigor and a restricted number of shoots per crown of leafy spurge. This

phenomenon occurred in all regions, and on all species of *Euphorbia* observed. The importance of *Rhizoctonia* spp., often in combination with *Fusarium* spp. as a major factor in controlling leafy spurge-like *Euphorbia* spp. is an extremely important finding in the work conducted in Europe and Russia.

After a day of work in St. Petersburg culturing samples at a laboratory set up by scientists of the Zoological Institute to assist the project of Dr. David Sands of Montana State University, I traveled to the ARS European Biological Control Laboratory in Montpellier, France to complete culturing of the samples obtained during the latter stages of the trip, and to transfer and purify earlier cultures. The facilities obtainable there were essential to the successful completion of the work. A dependable set of equipment, and the fulfillment of unforeseen supply needs could be obtained there. Ample space and facilities were made available with the help of Dr. Knutson. In addition, the cooperation of CSIRO personnel as in 1992 was very helpful, in obtaining agar media suitable for plant pathogens, petri dishes, as well as supplies for record keeping.

Recommendations

With the use of the e-mail address of the Zoological Institute obtained by Dr. Quimby on his visit in 1992, communications are greatly facilitated. This means of communication was only beginning to be used at the time just prior to departure. Greater use of e-mail will serve in the future to simplify planning and completion of arrangements for cooperative projects. A fax machine was carried over by Dr. Sands and faxes were exchanged with Bozeman, MT while we were there visiting the lab. Thus, excellent means for communication are now available and should be used. The scientists at the Zoological Institute have requested a modem for communications the nature of which wouldn't be handled optimally by e-mail or fax. I recommend that this request be fulfilled as soon as possible to enable a good range of communication media.

Continued interaction with Russian scientists is recommended, and has several potential mutual benefits. Projects carried out there have the advantage of utilizing the excellent knowledge and expertise of Russian scientists and of having a large benefit/cost margin. Continued cultivation of cooperation also could provide material improvement of Russian Agricultural Science. This would have the additional benefit of strengthening the quality of cooperative research and expanding the range of such projects scientifically. For example, purchase of weather station or microclimate measuring devices would strengthen studies of pathogen interactions with *Euphorbia* spp. and allow cooperators to utilize such equipment for their specific purposes.