RUSSIAN CHEATGRASS STUDY
Visit to the Great Basin by Four Russian Scientists

July 1 - July 13, 2001

Bob Clark

Background

Bromus tectorum (cheatgrass) and its allies are extremely important in the Intermountain West, especially the Great Basin, because they create homogenous, nearly continuous fuel beds and mature much earlier than most native herbaceous species. This results in frequent, large, wildland fires; extended fire seasons; damage to related ecosystem components; threats to life and property; and costly fire suppression and land rehabilitation.

Previous Work

In 1999 and 2000, representatives from the Bureau of Land Management visited several Regions and sites in the Mediterranean area of southern Russia to begin to understand where, when, how, and why cheatgrass and allied plants become dominant when introduced into western North America but do not appear to dominate sites in the Mediterranean area where these plants are thought to have originated.

Findings during these visits indicated that at least two major differences exist. First, although total annual precipitation is similar in Boise, Idaho and Volgograd, Russia (for example), the distribution is somewhat different, with southern Russia receiving more summer rainfall than the Great Basin. Summer rainfall is believed to allow additional growth and development of perennial species after winter annuals, such as cheatgrass, have completed their life cycles. Healthy perennials would be expected to help maintain the native plant community and discourage invasion by annual species. Second, natural plant communities in the Volgograd Region appear to be more complex and diverse; for example, the Volgograd Region has more than 2,000 species of plants compared to perhaps a hundred or fewer species on many sites in the Great Basin. It is important to note that cheatgrass rapidly and completely dominates disturbed sites in Russia, but these sites revert to more diverse, stable communities within three to five years of cheatgrass invasion. In contrast, such invasions in the Intermountain West rapidly dominate and appear to dominate indefinitely unless rehabilitation treatments are applied.

Despite many similarities, there may be additional differences between the two areas, including soil type and fertility and livestock management. For example, Dr. Neil West, Professor of Rangeland Ecology at Utah State University in Logan, theorizes that the Russian soils are much older and have been generally depleted of nitrogen. In contrast, Dr. West believes that the current cheatgrass/ wildland fire cycle is essentially “mining” the soil borne nitrogen pool in the Great Basin. If true, Americans should look toward the current soil situation in southern Russia to understand the Great Basin’s future rangeland productivity.

2001 Visit

In 2001, a delegation of four Russian scientists and managers were invited to the Intermountain West to view the cheatgrass situation and visit with American scientists and land managers concerning the similarities and differences between rangeland productivity and management in the two areas. The delegation included Victor Ivannikov, Regional Forester of the Kalmyk Republic; Dr. Taisia Ostray, Chief of Forest Rehabilitation in the Volgograd Region; Yuri Murlykin, Deputy Chief of Avialesookhrana; and Alexei Schedrin, also of Avialesookhrana, who acted as the interpreter. Avialesookhrana is the Russian Aerial Forest Protection Service with headquarters in Pushkino, Russia. Semi-arid public lands in Russia are managed by the Russian Forest Service; a counterpart to the U.S. Department of the Interior does not exist in Russia.

Yuri Murlykin presenting Russian Memorabilia at Meeting in Nevada

The 12-day visit began in Boise, Idaho. Delegation hosts included Bob Clark, Joint Fire Science Program Manager; Mike Pellant, BLM Idaho State Office Rangeland Ecologist (Idaho and Utah); and Connie Lewis, BLM Fire and Aviation Management Office of International Affairs (Nevada and Idaho). The delegation began its visit in Idaho where it visited the National Interagency Fire Center to understand American fire suppression priorities, strategies, and tactics; the Snake River Birds of Prey National Conservation Area to observe the impact of the elimination of the shrub component by repeated wildland fires and the subsequent domination by cheatgrass; and the 1994 Foothills fire area and rehabilitation work. The delegation also visited the USDA Agricultural Resources Service (ARS) lab in Boise where scientists are working on "matric priming" of native, perennial seeds and other methods to improve post fire rehabilitation, and visited with local land managers including BLM Idaho State Director Martha Hahn.

The delegation proceeded by vehicle in a clockwise direction around the northern Great Basin, with formal stops in Logan, Salt Lake City, and Provo, Utah; Elko, Reno, and Winnemucca, Nevada; and return to Boise. Additional informal stops were made to observe cheatgrass dominated sites. In Logan, the delegation visited with Dr. Tom Jones at the ARS lab. Dr. Jones is working on many plant materials projects including the evaluation and potential release of additional plant materials of Russian origin. The delegation also toured the ARS plant materials nurseries in Logan. The delegation had the rare opportunity to visit with Dr. Neil West at Utah State University; Dr. West is studying, and is very familiar with, similarities and differences of semi-arid lands in the Intermountain West and in southern Russia. The discussions with Drs. Jones and West were extremely productive. The delegation also visited with Drs. Steve Monsen, Durrant McArthur, and Susan Meyer of the USDA Shrub Lab in Provo where plant community rehabilitation and maintenance were discussed in a field setting. Coincidentally, a wildland fire with a Type II Incident Management Team was in progress in Utah and the delegation appreciated the opportunity to visit the Incident Command Post and burned areas. The delegation also visited briefly with BLM Utah State Director Sally Wisely. Dr. Monsen hosted the delegation one evening at his home in Provo.

In Nevada, the delegation visited cheatgrass dominated sites en route with stops in Elko and Reno. In Reno, the delegation visited with BLM State Director Bob Abbey and his staff, and was exposed to innovative satellite and computer technologies regarding fire detection and monitoring, rehabilitation projects, and related work. State Director Abbey also hosted the delegation one evening at his home. The delegation later spent a full day in Winnemucca visiting wildland fire sites with and without rehabilitation and came to understand how cheatgrass invades and appears to maintain dominance in the Great Basin, perhaps indefinitely, without rehabilitation.

The delegation returned to Boise and closed out with BLM Office of Fire and Aviation Director Larry Hamilton and his staff. During the closeout, representatives from BLM and Russia agreed to continue to work together to understand and resolve the cheatgrass problem in the Intermountain West. The delegation returned to Russia, via New York City, on Friday, July 13, 2001.

(left to right) Alexei Schedrin, Yuri Murlykin, Taisia Ostray, Victor Ivannikov with Nevada Staff. Bob Clark in checkered shirt on right.

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