

## GLASTNOST

### Doing Zebra Mussel Research in Russia

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Back in the early '60s when I was studying Russian as a high school student in the Bronx, I hoped I'd actually be able to use the language some day. Slim chance I thought, right? At the time, of course, I never imagined that problems with a finger-nail-sized, striped mussel would somehow be the reason for my speaking Russian again. Well, this past July - thirty years later - my dream finally came true as I found myself fumbling through my English-Russian dictionary on the streets of Moscow.

As an invertebrate pathologist with an interest in biological control, I had wanted for some time to learn more about parasites of *Dreissena* and what role they played in limiting host population densities in Eastern Europe. Very little scientific literature, however, existed on this subject.<sup>1</sup> This trip to Russia was undertaken to address this information gap by conducting a survey of the parasites of *Dreissena polymorpha* populations in the Moscow/St. Petersburg region.<sup>2</sup>

The trip went well both personally and professionally, and as I reflected upon it this past fall with *DpIR* editor, Chuck O'Neill, he encouraged me to submit a story on what it was like to do research in Russia. I fully realize that a single scientific trip to Russia hardly makes one a travel guide. However, if you're planning such a trip or simply curious about the subject, my experiences and advice might be helpful. Stories I've heard from other travelers lead me to believe that my comments about Russia are also likely to be relevant to what might be experienced in other republics/countries that have emerged from the former Soviet Union.

#### Letter of Invitation

If you want to do research in Russia, start planning months in advance. The first item to focus on is getting a formal letter of invitation from a Russian institution/organization. This letter is absolutely necessary in order to obtain your visa. You might think that getting it should be easy. It would seem that all you have to do is to identify a Russian institution whose research area overlaps yours and then write a letter describing your professional background, outlining your research plans, and offering to collaborate with their staff. Since Russians are desirous of contacts with Western scientists, a letter of invitation should promptly be forthcoming, right? Unfortunately, this approach does not often prove successful. My own experience has been that the heads of these heavily bureaucratic institutions believe that Western scientists have significant research budgets that should be shared with their cash-strapped Russian institutions. Arguments to the contrary from North American scientists who are on shoe-string budgets do not seem to dissolve this stereotype. So, if you have enough money in your budget to help compensate them for their involvement, you should be able to get an invitation letter without undue delay. Fortunately, there are other approaches. For example, if you already know staff or faculty members at a Russian institution, they may be able to convince their administration to send you a letter with no (or minor) financial strings attached. That's what I did.

Apparently, individual scientists can not represent their institutions and write such letters themselves; someone high up in the administrative ranks always seems to be required. Besides the obvious details of "when, where, and why" you're visiting, such letters of invitation must also state your home address and

date/place of birth as these details are critical for your visa application. If you haven't yet finalized your air travel dates, play it safe and have the letter of invitation indicate a broad window of time so that the trip will occur completely within this time period. With letter in hand, you can now apply for your visa.

#### Visa

Because you will be traveling professionally, you will need to apply for a business (vs tourist) visa. Contact the Consulate General of the Russian Federation either in New York (212-348-0926) or Washington, DC (202-939-8918) for the application. If your application is completed to their liking, you should have your visa back in the mail within 2-3 weeks (quicker turn around times are possible for a higher visa fee). It would be prudent to apply as soon as possible, just in case additional information is required either directly from you or from your Russian contacts.

#### Flight Information

A number of airlines fly into Russia's largest cities (e.g. Moscow, St. Petersburg). Contact them to find out about special fares for advance ticket purchases. In addition, the travel section of the Sunday New York Times carries tiny, zebra-mussel-size ads from travel agencies which buy blocks of tickets on major airlines at discount prices. That's where I purchased mine for \$820 (RT New York - Moscow). There are also travel agencies with lots of experience in arranging trips to the former Soviet Union; they not only can arrange for economical airline fares, but can also handle your visa application and even secure the letter of invitation required to get the visa!

#### Accommodations

My advice is to avoid the major Intourist hotels with their "for foreigners only" inflated prices of over \$100/night. Ask your local contacts to find a family who would supply a room and meals. This way you'll get a chance to really meet the Russian people, and get good home-style cooking! In addition, your financial assistance would certainly be a major boost to that family's income (e.g., a university faculty member and postdoc that I met had salaries of \$20 and \$5 per week, respectively). Staying with a family that owns a car (only about 10% have them) would be a real bonus to your mobility too (assuming, of course it's working!).

#### Inter-Continental Communication

There's no completely foolproof way of sending information to and from Russia. I have used five different methods which are, in order of declining usefulness: faxing, E-Mail, postal system, telephoning, and telegrams. God bless the fax machine. Your fax message (ca. \$1-3 per min) will arrive in Russia instantaneously and, more importantly, you can be pretty sure that your contact person will receive it (as compared with some postal letters which mysteriously disappear!). Without a long diatribe on the pros and cons of each communications method listed above, faxing is by far my first choice. Keep in mind, however, that Russians will have a similar dollar cost in faxing you a message, and those few dollars may be a sizable portion of their office budget. It is far more economical for them to send airmail letters. Such letters usually make it onto your desk within two to three weeks, black holes excepting.

#### Lab Space and Equipment

When I first started to plan my trip, I envisioned using dissection and compound microscopes at Russian institutes in

order to examine the field-collected mussels. But can one ever be sure that promised equipment will materialize when you are visiting another's laboratory? Because of this uncertainty, I chose to bring all my own equipment and supplies, including the scopes. This meant packing a significant number of items (including voltage adapters) while at the same time being careful to stay within the weight/size limitations for international air travel. Furthermore, rather than work at an institute, I decided to do the dissections in the apartments in which I was living. In this way, I could be very independent, working late at night or on the weekends. It was the best of both worlds. I was free to visit scientists at local institutes or invite them over to work with me at the apartment. It was an extremely productive arrangement. Whatever scientific equipment you bring, be sure to have a manifest or list of major items for possible inspection by Russian customs officials when both entering and leaving the country.

### **Designing Your Dreissenid Research Plan**

There is no way that you will know if your plans can be realistically carried out without pre-trip feedback from your Russian contacts - preferably scientists in your subject area who truly know the limitations of doing your particular kind of research in their own country. Their advice on the "how, where, when and what" of your research design will be indispensable to your formulating a realistic program. Of course, with the instability that Russia is now experiencing, even the best formulated plans could evaporate overnight.

As in other European countries within which I have conducted research, I initially planned on renting a car and traveling independently far and wide in my research quests. Wow, was I naive. Fortunately I learned well in advance of the trip that there were essentially no rental cars, that roads outside the cities were pot-holed and difficult to travel on, that gas availability was unpredictable, that auto repair shops were scarce and expensive, and that crime was skyrocketing. All of which translated into the possibility of my spending most of my precious trip time trying to figure out how to get from one collection site to the next without being stranded or ripped off. So what did I finally do? I paid Russians to go collect the mussels for me. Thus, during my three week trip, I had almost daily deliveries of fresh mussels. For me to travel with the Russians to each collection site would have been very enjoyable, but too time consuming for my initial trip; I was able to examine far more material by having others collect for me.

One suggestion on how to transport mussels. In the U.S., I have always relied on putting mussels in bulky, picnic-style coolers containing ice. In Russia, however, ice is one of those precious commodities rarely available in stores. The solution was to make some ice in the "glove-box" size freezer within my apartment's refrigerator and to put those precious few chunks into a large, wide-mouthed, heavy-duty thermos. Samples of zebra mussels in the field were then placed into small, sealed plastic bags and held in the icy water of the thermos until they arrived back at the apartment. The thermos I used held the ice water for days - far longer than a picnic cooler would have.

### **Final Thoughts**

Hopefully, if you're planning a trip, the above information might be of some help to you. If you have any questions, please get in touch (I'll tell you everything I know which may not be much!).

I am planning on going back again to Russia again this summer, and if you need some samples, I may be able to be of some assistance. I am also looking for individuals to whom I could supply fixed mussel tissue for histological examination for parasites. Please get in touch if you're interested in a cooperative project.

Whereas this article has dealt with the logistical experiences of my research trip, the scientific information generated by the parasite survey was presented at this year's International Zebra Mussel Conference in Madison, Wisconsin in a paper co-authored by Dr. Jeffrey Shields (Virginia Institute of Marine Sciences) and Dr. Vitali Roitman (Russian Academy of Sciences Institute of Parasitology).

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### **Footnotes:**

<sup>1</sup>- Molloy, D. 1992. Do zebra mussels have parasites?  
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<sup>2</sup>- Funding from the Empire State Electric Energy Research Corporation as part of a cooperative project on the microbial control of zebra mussel is gratefully acknowledged.

*(Daniel P. Molloy, New York State Museum)*

## **POLICY ISSUES**

### **Former Rep. Bob Davis Joins Zebra Mussel Battle: Announces Formation of National Alliance**

Former U.S. Representative Bob Davis announced, in December, the formation of the National Zebra Mussel Alliance, a non-profit association dedicated to enhancing the congressional response to the zebra mussel threat. Mr. Davis will serve as association president. The Alliance will be comprised of corporate, industrial and municipal water users.

Any industry which removes untreated water from zebra mussel infested waters is at risk to physical blockage of its intake pipes, therefore reducing flow capacity. Congressional researchers estimate the mussel will cost the power industry alone \$3.1 billion over the next seven years. Experts estimate the mussel will cost industries, business and communities over \$5 billion by the end of the decade.

Mr. Davis served in Congress for 14 years and, as vice chairman of the House Merchant Marine and Fisheries Committee, was a leader in the fight against the mussel, and sponsored the Nonindigenous Aquatic Nuisance Prevention and Control Act of 1990, which authorized funding for non-indigenous species threats, like the zebra mussel. "In 1990, we in Congress acknowledged the zebra mussel problem by authorizing funding, but they simply have not followed through on the appropriations. This is where NaZMA steps in," Davis said.

While the federal government funds zebra mussel research and outreach education programs through the National Sea Grant College Program, and some zebra mussel control efforts