



WORLD BOTANICAL ASSOCIATES

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RICHARD SPJUT

October 17, 1986

Dr. David G. I. Kingston, Professor of Chemistry
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Blacksburg, Virginia 24061

Dear David:

The enclosed shipping list gives the details of a shipment being delivered to you on October 18, and a previous shipment sent to you from Oregon. The shipment being delivered to you on October 18 consists of 12 medium-sized burlap bags and 2 small white cotton bags. Ten of the burlap sacks are recollections of mosses, 1 burlap sack includes general samples, and the other burlap sack has miscellaneous recollections. The two smaller white cotton bags are left over material of recollections Dicranum fulvum and Hylocomium splendens that would not fit into the large burlap sacks. The small white bag of Dicranum fulvum was not accounted for on the shipping list; thus, this recollection was packed into 3 brown burlap bags and 1 white cotton bag. All samples are clearly labeled on the outside as to contents.

I have additional material of Diphysium foliosum not yet dried, and plan collect more of Hylocomium splendens and Ptilium crista-castrensis to complete the order.

The following comments are in regard to several of the samples.

- Diphysium foliosum-clods are essentially what was originally supplied to the NCI in 1980, and to you in 1984. The Diphysium foliosum clod often occurs as a morphologically distinctive unit - a rather spongy spherical loose mass of moss intermixed with soil. Not all of the soil can be removed from the moss without losing moss. Therefore, it is possible that the active chemical could be the product of a closely associated microbe. Your isolation work might actually provide more clues. In any case, it may be important for you to fully describe the sample when the time comes for you to publish your isolation results. In the September 29 issue of Chemical Engineering News (p 64), it was stated that "screening soil molds for vancomycin-type antibiotics turns up one new compound for every 320 tests" as compared to "10,000 to 100,000 tests using other methods".
- Peltigera canina and Peltigera elizabethae. The original sample should be reidentified to Peltigera canina based on my voucher materials.

This has been further verified by returning to the original collection site in Wisconsin. In 1984, I may have indicated to you that the Peltigera sample was closely associated with the moss Tortella tortuosa. This moss has never been tested, and a sample was recently collected for you to evaluate this possibility. Upon returning to the original collection site, I also discovered that Peltigera canina occurs frequently with the mosses Plagiomnium cuspidatum and Plagiomnium rugicum. Nearly all species of Mniaceae screened have shown activity. The original Peltigera sample was cleaned by rubbing the dried material over a metal screen to remove the soil. This works well with moss samples but not so well with lichens because lichens are very fragile when dry and can shatter into numerous tiny fragments that can easily become lost with the debris when using a metal screen as a filtering device. Rather than elaborate on this further, I recommend that the reported Peltigera polydactyla lead be re-evaluated on the basis of the samples recently collected (WBA 430-435). Additionally, the Peltigera samples (in the vicinity of the original collection site) were collected in large quantities, and I spent a great deal of time (from 8 hours for 160 g of P. horizontalonius to 40+ hours for 6 lb. of P. canina) removing suspected bryophyte and soil contaminants before the samples dried. The 2 largest samples might be treated as recollections since these represent about 10 times the quantity that was originally supplied even though they weigh only 2-6 pounds, and if activity occurs in extracts of the cleaned and extra-cleaned samples, this should verify that you are getting activity in a lichen sample, and not the materials that cling to the lichen.

I will be shipping additional samples before the end of October 30.

Sincerely yours,



Richard Spjut, Director

cc:

G. Cragg