International Committee on Systematic Bacteriology Subcommittee on the Taxonomy of *Agrobacterium* and *Rhizobium*

Minutes of the Meeting, 11 August 1982, Boston, Massachusetts

Minute 1. Call to order. The Chairman, E. B. Roslycky, called the meeting to order at 16:05 on August 11.

Minute 2. Record of attendance. Members present were: E. B. Roslycky (Chairman), D. C. Jordan (Secretary), J. De Ley, and H. H. Keyser. Visitors were Y. A. Abd-el-Malek (Egypt), S. A. Z. Mahmoud (Egypt), and Barbara J. Kammick (University of Wisconsin). Apologies were received from the nonattending members.

Minute 3. Problem of species identification within the genus *Bradyrhizobium*. J. De Ley pointed out that although methods exist for the systematic examination of the bradyrhizobia, there are problems related to the availability of funds and trained personnel. He suggested that a central collection of strains of the root nodule bacteria might facilitate research. Such an undertaking would be quite expensive, however, and it was felt that the existing collections are adequate for the time being. H. H. Keyser mentioned that the collection at the U.S. Department of Agriculture Beltsville laboratory maintained under a U.S. Department of Agriculture-Agency for International Development program would accept and maintain any strains of root nodule bacteria sent to it. Such cultures could be sent to Deane F. Weber or Harold H. Keyser, U.S. Department of Agriculture, Beltsville Agricultural Research Center, Cell Culture and Nitrogen Fixation Laboratory, Beltsville, Md. Other important source collections are those of the Commonwealth Scientific and Industrial Research Organization (Brisbane and Canberra, Australia), the NifTAL Laboratory (Maui, Hawaii), the Rothamsted Experimental Station (Harpenden, England), CIAT (Cali, Colombia), and others listed in the *IBP World Catalogue of Rhizobium Collections*.

It was generally concluded that it will be at least a decade before adequate species identification can be attempted in *Bradyrhizobium* and possibly also in certain taxa containing fast growers, such as the organisms from *Leucaena*, *Cicer*, *Acacia*, etc.

Minute 4. Fast-growing "soybean strains." The Subcommittee discussed the fast-growing "soybean strains," such as those reported by Wright (1925), Ishizawa (1952 to 1955), and, more recently, Keyser et al. (Science 215:1631-1632, 1982). Several investigators are currently working with these strains, and results from the U.S. Department of Agriculture, University of Hawaii, and Guelph, Ontario, suggest that these strains are members of the genus *Rhizobium*

rather than *Bradyrhizobium*. During the discussion the Secretary mentioned the intention of Y. Dommergue and Bernard Dreyfus (Dakar, Senegal) to send him several strains of the nodule bacteria from *Sesbania*. These plants bear stem nodules at the point of lateral root initials as well as root nodules. Two different strains of bacteria are involved, one producing root nodules only and the other producing both root nodules and stem nodules. It was decided that this small group of bacteria might be used in a trial effort to have several laboratories examine these strains by different taxonomic techniques and to pool the results. If such a procedure is successful, then this same method might be employed for other select groups of nodule bacteria. Upon receipt of the cultures from Dakar, the Secretary will undertake to send subcultures to selected individuals who have indicated a willingness to participate in this joint enterprise.

Minute 5. *Agrobacterium*. J. De Ley, in discussing *Agrobacterium*, indicated that this genus requires revision over and above that which took place for the forthcoming *Bergey's Manual of Systematic Bacteriology*. De Ley kindly agreed to write a paper suitable for publication in the International Journal of Systematic Bacteriology and to circulate a rough draft to all members of the Subcommittee for comment.

Minute 6. *Lotus rhizobia*. A letter from Brian Jarvis was read, in which he revealed that he had recently completed a study of deoxyribonucleic acid homology among the *Lotus rhizobia*, which showed that *Rhizobium loti* is similar to his homology group 4 and clearly different from slow-growing *Lotus rhizobia*. Some slow-growing *Lotus rhizobia* show homology with *Bradyrhizobium japonicum* strains classified as group 2, subgroup 1 by Elkan. This information will be published soon. It was noted by the Subcommittee that the new species *R. loti* has now been validly published in the most recent issue of the International Journal of Systematic Bacteriology.

Minute 7. Election of officers. At a closed session the Subcommittee decided to initiate an election of officers at the earliest opportunity. This will necessitate a call for nominations for the offices of Chairman and Secretary, to be followed by a mail election.

The meeting was adjourned at 17:32 on 11 August.

D. C. JORDAN, Secretary