



FOREWORD

It was in June, 1966 when I started working for the tree disease scientists at the Forestry Sciences Laboratory in Moscow, Idaho. That autumn I would start my University course in Forestry which eventually would lead to a long and rewarding career as a Forest Pathologist. But I knew none of that 44 years ago as a lowly paid summer aid hired by the Blister Rust research project. We were evaluating the effects of ‘antibiotics’ (Actidione and Phytoactin) on established blister rust cankers on western white pine. My job was to locate the previously marked study trees (often not as simple as it might seem) and record data on the activity of treated blister rust cankers. The work took us in rickety four-wheel drive vehicles to remote locations scattered across the white pine forests of northern Idaho. I remember the scientists ‘reading’ the cankers, often in drizzling rain, and calling off items for me to record; ‘no acelia, no pycnia, no TM (i.e., *Tuberculina maxima*)’ (LEAPHART and WICKER 1968).

I learned a considerable amount during that summer, and several following, about the biology of *Cronartium ribicola* as well as the dynamics and impacts of the disease it causes. At times I stayed in Forest Service ‘Blister Rust’ camps, where the food was hardy and plentiful, even if we did have to make our lunch-time sandwiches at 6:00 AM. Many young men alongside a few women went out day after day from these camps to grub, spray and otherwise eradicate *Ribes* bushes from the forest in another vain attempt to control white pine blister rust (see Figure 1, ZAMBINO 2010, this issue). These crews were (with some affection) known as ‘Ribie-goons’. While the efforts at removing *Ribes*, as well as the crews other primary function of fire suppression, are both now seen in hindsight as having perhaps questionable value, the effort at least paid tuition for many forestry students.

Working with Brian Geils on this Special Issue of *Forest Pathology* brought back many fond memories of those early times in my career. I saw the disease just beginning to move into subalpine stands of whitebark pine, many of which are now devastated (see TOMBACK and ACHUFF 2010, this issue). Millions of western white pine saplings and poles which had regenerated after the historic great fires of 1910 were dying from blister rust in a situation akin to a ‘perfect storm’ (see GEILS et al. 2010, this issue).

I worked alongside the crews locating the first selections for a new genetics program to breed rust resistance into western white pines (see KING et al. 2010, this issue). In the fall and winter, I worked part time rearing *Ribes* plants to grow rust spores. The spores were used as inoculum to challenge the seedling progeny reared from these early selections of putatively rust-resistant parents. I was at the laboratory, washing many of their glass Petri dishes, while scientists celebrated early advances in culturing this ‘obligate parasite’ (HARVEY and GRASHAM 1974). When the scientists could find little else for me to do, I was given stacks and stacks of publications on white pine blister rust and told to write abstracts about the work and categorize them on ‘unisort analysis cards’ into one or more of several topics. That, of course, meant that I had to read, which had not been a strong point for me as a youngster. Little did I know that this effort would eventually lead others to develop the annotated bibliography that serves as the basis for the review in your hands now (see GEILS et al. 2010, this issue).

I hope the presentation and synthesis of information in these chapters provides you, the reader, with an overarching view on the state of our knowledge regarding *C. ribicola* and the disease it causes in an array of environments, as well as the policy and management actions used or proposed to deal with it. Issues of the future (e.g., climate change, new introductions, etc.) are highlighted, as are lessons learned from the past. A concentrated

effort has been made to cross-reference information among chapters and provide a scholarly assessment of the literature.

The authors were generally patient, if not always in agreement, with the vision that Brian and I tried to weave into this treatise. Many of the authors had written earlier drafts of their chapters with a different outlet and intent in mind. I thank them for their willingness to not only provide material but also subject their writings to my editorial eye, not to mention my pen, for this Special Issue of *Forest Pathology*. As I near the end of my formal professional career, it has been a pleasure to revisit where it started thru the eyes of these many fine contributors.

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References

- GEILS, B.W.; HUMMER, K.E.; HUNT, R.S., 2010: White pines, *Ribes*, and blister rust: a review and synthesis. *Forest Pathology* **40**, 147–185.
- HARVEY, A.E.; GRASHAM, J.L., 1974: Axenic culture of the mononucleate stage of *Cronartium ribicola*. *Phytopathology* **64**, 1028–1035.
- KING, J.N.; DAVID, A.; NOSHAD, D.; SMITH, J., 2010: A review of genetic approaches to the management of blister rust in white pines. *Forest Pathology* **40**, 292–313.
- LEAPHART, C.D.; WICKER, E.F., 1968: The ineffectiveness of cycloheximide and phytoactin as chemical controls of the blister rust disease. *Plant Disease Reporter* **52**, 6–10.
- TOMBACK, D.F.; ACHUFF, P., 2010: Blister rust and western forest biodiversity: Ecology, values, and outlook for white pines. *Forest Pathology* **40**, 186–225.
- ZAMBINO, P.J., 2010: Biology and pathology of *Ribes* and their implications for management of white pine blister rust. *Forest Pathology* **40**, 264–291.