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# *Rhinocapsus vanduzeei* Uhler, A Little Known Pest of Azaleas

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*Rhinocapsus vanduzeei* is probably a fairly common inhabitant of our azalea gardens even though it is not listed in any of the azalea books. Few people seem to be familiar with it, and it does not seem to have a common name. Generally considered to be a pollen feeder or plant eater, my initial introduction to this brilliant red bug included discovering that its most significant characteristic, as I learned first hand (no pun intended), is not its brilliant red color, but rather the fact that it bites. Based on my experience, I am going to add it to my list of azalea pests even though it may have some redeeming qualities.

*R. vanduzeei* is a member of the family *Miridae* which is the largest group within the Order *Heteroptera* or the true "bugs." Reportedly distributed from Canada south to Florida and west to Texas, it probably can be found wherever azaleas are found. In 1926, wild red raspberry species were recorded as the primary host plants. Today, native and cultivated azaleas are recognized as the preferred host. Typically overwintering in the stems of azaleas, the eggs hatch in early to mid April, proceeding through five nymphal stages or instars, with adults developing in mid-May in the Washington area. The newly hatched nymphs, less than one millimeter in length, are not initially so distinctively colored. Later nymphs are bright red and between one and one-half and three millimeters in length, with the gradual development of dark brown or black wings. Adults, nearly four millimeters (0.15 inches) in length, become more of an orange with distinctively contrasting, black wings. Mating and egg laying take place in June and by late June, when most of the azaleas have finished blooming, the cycle is complete.

My interest in *Rhinocapsus* began when I noticed a small, red bug on one of a number of deciduous azaleas that were then blooming in my back yard. Much too big to be a spider mite, a common azalea pest which is red, this new insect seemed to have a preference for deciduous azaleas that were flowering. With as many as a dozen individuals per plant, there did not seem to be any obvious damage attributable to this bug which I thought, for better or worse, reminded me of a bright-red aphid. At the time, I wondered if this new bug might have been associated with my white-pine canopy and was in my azaleas by coincidence due to proximity. This would explain why I could find no reference to anything like it in any of my azalea books. By observation, I determined this new discovery was approximately three millimeters long, had three pairs of legs, and moved rapidly when disturbed. Turning to my modest collection of insect books did not help. Even though there was no way that I had something rare in my back yard, I concluded that I was going to need a picture of this insect if I was ever going to find out what it was. For those of you who are metrically challenged, three millimeters is slightly more than one-tenth of an inch. While I am fairly comfortable with my SLR Nikon Model FM camera, a good photograph would require closeup lens, light and depth of field considerations, and a cooperative subject. As it turned out, two out of three was the best that I could hope for.



Figure 1. (Top) A juvenile *Rhinocapsus vanduzeei* Uhler feeding on a thrip.



Figure 2. (Bottom) An adult *Rhinocapsus vanduzeei* Uhler.

When disturbed, the subject would very quickly and consistently seek cover where my camera could not conveniently follow—the bottom of the leaf or the other side of the stem. If I was ever going to get a decent picture, I was going to have to figure a way of isolating the subject and limiting its mobility. My solution was to place the subject on my hand and adjust my hand as it moved. As expected, the subject moved quickly, presumably looking for cover. Then, for some reason it suddenly stopped moving. As my finger began to bear down on the camera's shutter release, I suddenly discovered why my subject stopped moving. It bit the living daylights out of me!

Armed with the knowledge that a proper description now had to include the fact that my mystery bug was not entirely meek and defenseless, I decided I had enough "raw

data" to check with my horticulturist friends who are closer to such matters. I theorized that they would certainly be able to tell me what I had stumbled across based on the strength of my newly enhanced description. To my surprise, none of my horticulturist friends could tell me what I had discovered. When I presented a specimen to a Master Gardener Clinic, they could not tell me what I had either. They did not have a clue though they thought that its mobility suggested that it might be a predator. This was proving to be a real challenge. I had already invested many hours into this investigation with little to show for it except a sore and swollen finger.

Frustrated and now wounded, I decided "to pull out all of the stops." I called Dr. John Neal, an entomologist with the U.S. Department of Agriculture, an ASA member, and more importantly, a friend of long standing who has been very patient with earlier questions regarding matters entomological. He was familiar with the bug that I was describing but could not come up with the name on the spot. He was sure that it was a plant eater, was not uncommon, and he would get back to me. Dr. Neal subsequently sent me a copy of a 1979 American Rhododendron Society Quarterly Bulletin which contained an article by Drs. A. G. Wheeler, Jr. and Jon L. Herring on *R. vanduzeei* entitled "A Potential Insect Pest of Azaleas" (1). It was a direct hit. There was no doubt. My bug now had a name and a history dating back to 1890.

Given that the ARS article was fourteen years old, I expected that there must be more information available. I contacted Dr. Thomas J. Henry (2), mentioned in the ARS article, and Dr. A. G. Wheeler, Jr. (3), one of the

authors, to see what the latest information was. Drs. Wheeler and Henry are authors of the Mirid section of a catalog entitled *Catalog of the Heteroptera, or True Bugs, of Canada and the Continental United States* which was published in 1988 (4). They indicated that the basic biology communicated in the ARS article was still pretty accurate though the references to distribution could probably be updated to indicate that *R. vanduzeei* is likely found wherever azaleas are found. Further, Dr. Henry also indicated that there was reason to believe that, like many of the mirids, it might have predaceous tendencies, as he had observed that it could be lab-reared on squashed caterpillars. Finally, Dr. Wheeler suggested that I contact Dr. Kris Braman of the University of Georgia for her observations of its predatory behavior (5). Dr. Braman has studied the effect of *R. vanduzeei* on thrips species and the azalea lace bug. In 1992, she obtained *R. vanduzeei* from azaleas at Callaway Gardens in Pine Mountain, Georgia and measured the "consumption rate" or the ability of *Rhinocapsus* to consume various stages of the azalea lace bug. She found that fifth instar and adult *Rhinocapsus* were a particularly effective natural enemy or control of juvenile azalea lace bugs (6).

In conclusion, I believe I have learned a great deal from this experience. First, there is the message that *Rhinocapsus* should be seriously considered as an element in an Integrated Pest Management program for azalea pests. Second, I am still going to add it to my improved list of azalea pests. Third, in the future, I am going to do my best to stay out of its way in my garden. And finally, fourth, I am going to revise my technique for handling uncooperative photo subjects.

## References

(1) Wheeler, A. G. Jr. and Herring, Jon L., A Potential Insect Pest of Azaleas, *The Quarterly Bulletin of the American Rhododendron Society*, Vol. 33, No. 1, Winter 1979, pp 12-14.

(2) Dr. Thomas J. Henry is a systematic entomologist with the National Museum of Natural History in Washington, D.C.

(3) Dr. A. G. Wheeler, Jr. is an entomologist with the Bureau of Plant Industry of the Pennsylvania Department of Agriculture in Harrisburg, Pennsylvania.

(4) Henry, T. J. and Wheeler, A. G., Jr. 1988. Family Miridae Hahn, 1833 (=Capsidae Burmeister, 1835), pp. 251-507. In T. J. Henry and R. C. Froeschner [eds.], *Catalog of the Heteroptera, or True Bugs, of Canada and the Continental United States*. Brill, New York.

(5) Dr. S. Kristine Braman is an entomologist with the Department of Entomology of the University of Georgia at the Georgia Experimental Station in Griffin, Georgia.

(6) Wise, J. A., Braman, S. K., and Espelie, R. E., *Natural Control of the Azalea Lace Bug in the Landscape*. SNA Research Conference, Vol. 37, 1992, pp 28-29.

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