FROM: FOUR SEASONS 10(1) 1995

Shatterberry Manzanitas

by Jon E. Keeley

MANZANITAS PRODUCE INDEHISCENT drupes, and hence it was considered by Alice Eastwood to be of real significance that four northern California species of *Arctostaphylos* produced dehiscent fruits—"a character unknown in any other genus of the group." These taxa were described by Eastwood as having fruits that split apart spontaneously while still attached to the shrub, and Howell (1949) named one of these species "shatterberry manzanita" because of this characteristic.

So important in her opinion was this apparently unique dehiscence characteristic that she used it as the basis for erecting a new genus: *Schizococcus*. Most subsequent authors, however, have retained the species she placed in it in *Arctostaphylos* (*A. nummularia* Gray, *A. nissenana* Merriam, *A. myrtifolia* Parry, and *A. sensitiva* Jepson).

I report here observations that contradict Eastwood's original conclusion that fruit dehiscence is a trait restricted to the four species of manzanita she placed in *Schizococcus*. I have observed spontaneous dehiscence of fruits prior to dispersal in two other species of *Arctostaphylos*. Fruit dehiscence has been observed most commonly in *A. patula* Green between 2200–2500 m in the San Bernardino Mountains (San Bernardino County). Because of the high elevation, these fruits were just approaching maturity in November of 1992. At this time shrubs had a low percentage of fruits that were in various stages of dehiscence (figure 1). This character was not uniform on a shrub and varied from approximately 1% to 10% of the fruits. The fruits at this time were not dry; rather, the inner mesocarp was still quite succulent.

There is some evidence from the literature that this phenomenon is rather widespread in *A. patula*. Rollins (1937), in his description of *A. pinetorum* (now synonymized with *A. patula*) from the Rocky Mountains, noted:

FIG. 1. Drupe of *Arctostaphylos patula* Green in course of dehiscence while still attached to the shrub, some nutlets already separated, others not.

A puzzling phenomenon concerning the berries of *Arctostaphylos pinetorum*, is the apparent dehiscence which occurs while they are still attached.

Rollins's description that "the flesh curls back along indefinite lines leaving the bony nutlets exposed" appears to describe quite well the phenomenon I have observed (figure 1).

I have also observed similar dehiscent fruits on an unnamed burl-producing form of *A. parryana* Lemmon, also from the San Bernardino Mountains at about 2200 m. As with *A. patula*, the phenomenon was widespread in the population but amounted to no more than a small percentage of the fruits on any shrub.

Clearly the phenomenon of fruit dehiscence does not appear to be restricted to Eastwood's original *Schizococcus*—supporting the decision of most other students, who have subsumed her taxa under *Arctostaphylos*. Although I have made no observations on Alice Eastwood's *Schizococcus* taxa, the present observations suggest that perhaps Phil Wells (1992) may have been a bit hasty when he claimed that Alice Eastwood's term *Schizococcus* was a "misnomer based on an erroneous notion that the nutlets split apart spontaneously."

Literature Cited

Eastwood, A. 1937. Notes on *Schizococcus*, with a key to the species. *Leafl. Western Bot.* 2:43–64.

Howell, J. T. 1949. *Marin flora*. Berkeley and Los Angeles: Univ. Calif. Press.

Rollins, R. C. 1937. Two new species of *Arctostaphylos* from the Rocky Mountains. *Rhodora* 39:462–64.

Wells, P. V. 1992. Subgenera and sections of *Arctostaphylos*. *The Four Seasons* 9(2):64–69.