Early Botanical Heroes of the Northcoast

by Paul Wilson

What plant enthusiast has not seen the names Green, Bolander, Eastwood, Jefferson? They appear in association as authors of species and in honorary plant names. Who were those people? What was botanizing like back then? What did they give us?

The early plant collectors of our area can be classified into three groups: expedition botanists, amateur plant collectors, and professional botanists. The first group dominated Northcoast botany until about 1875. After that the other two took over, and, in a modified form, they are still at it.

The first collector in our area was Archibald Menzies (probably pronounced Minges). He was the surgeon/naturalist on the Vancouver expedition. In 1793, the expedition anchored off Trinidad for four days (2–5 May 1793). Plants were brought to Menzies; however, he didn't even bother to go ashore, rather ironic fact considering he was the first botanist in our area. Nevertheless, his significance in the broader picture of Pacific Coast botany is not to be dwarfed. It seems the first inland collecting in our area was done in 1841 by William Dunlop Brackenridge, of the ill-organized U.S. Exploring Expedition (commonly known as the Wilkes Expedition after its "leader"). William Rich was the expedition botanist, but he seems to have left most of the collecting up to Brackenridge, who was officially the naturalist/naturculturalist. Legend has it that Brackenridge made the first collection of Darlingtonia while being actively pursued by hostile Indians.

A decade later, in 1852 John Jeffrey collected in the Klamath ranges. Jeffrey was sponsored by the Oregon Botanical Association of Edinburgh—each member was to receive a portion of the seeds he brought home (gathering seeds was a big thing). He was also expected to keep a journal, but failed to do so. One other European of some significance was Robert Brown of Campster who collected along the Smith River for the British Columbia Exploring Expedition in 1865.

Of all the expedition botanists, two stand out as exceedingly important. They were the botanists of the California Geological Survey—William H. Brewer and Henry Nicholas Bolander. Brewer was with the Survey from 1860 to 1864; he was succeeded by Bolander who held the position until 1873. Together Brewer and Bolander botanized most of California, many areas of which had never been collected. In 1863 Brewer collected the Northcoast more extensively than had anyone before him. With his collections, he eventually coauthored with Sereno Watson, Botany of California, a two volume work which Keck calls, "the starting point for all subsequent floras that have been produced in the state." Bolander's collections are perhaps even more important. In addition to vascular plants, he gathered many mosses, and of the moss species in our area, more are named for him than for any other person.

I digress now from my listing to explain some of the perils and also rewards associated with the pioneer botanizing. The Northcoast was a pretty wild place. Before about 1890 conflicts with the native peoples were often violent. Brewer wrote many pages in his journal about the situation. (His view of the matter was: "Nothing short of the hostile Indians absolutely eliminates the opportunity to study plants.") The Indians were eventually conquered, but the Northcoast still had built-in limitations. Probably the most trying of these was getting to where the plants were and bringing them back. Trails were poor at best. Pack animals were slow and expensive. Despite the problems that came with this, the Northcoast botanist was not without its lure. Undescribed species were quite common, and I think it is safe to say that any good botanist who survived the hazards was nearly sure to find something of interest.

Now to return to my survey, I will intermix the professional with the amateur botanists. Before the century the distinction was tenuous, but later it became very strong. The two groups differed not only in the way their work was financed, but also in how they handled problems. Professional botanists tended to publish their own finds, whereas amateurs normally sent undetermined specimens to professional botanists. In the years before about 1890, specimens were generally sent to the eastern establishment botanists led by Asa Gray at Harvard. Gray died in 1888, and then slowly the local botanists at Berkeley and California Academy of Science were able to seize command.

The first post-exploration botanist was Volney Rattan, a high school teacher and later normal school teacher. He was one of those old guard gentleman/naturalist types. He authored Popular California Flora, and the several plates in it are that very high quality Victorian style which is now rarely, if ever, equaled. Rattan collected our area regularly in the summers. Starting in 1873, he found many new species which were sent to Gray who veridid himself in naming them — rattanii.

Another semi-professional was Thomas Jefferson Howell. Howell was mainly into Oregon plants, but he did collect in our region. T.J. Howell made a living, albeit a frugal one, collecting and selling seeds and plant specimens. He was scantly schooled, but he eventually taught himself enough to write, type set, and print his A Flora of northwest America.

And that brings us to one of my favorites: Edward Lee Greene. Greene was a minister in Yreka and then in San Francisco from 1867 to 1885. During this time he was an amateur plant enthusiast, and made enormous collections. Evidently he was nearly as controversial in his ecclesiastic role as he later became as a botanist. Once, half his congregation locked him out of the church. Jepson wrote, "and we have preserved for us the picture of the Rev. Mr. Greene, in surplice, passing down Bancroft Way, an axe over his shoulder and the faithful of his flock behind him, beating down the doors of St. Mark's church.

Shortly after this, Greene was defrocked and went to teach at Berkeley. He became very
active in plant taxonomy, nomenclature, and the history of botany. Throughout his life, he was involved in many, often vicious, controversies, almost always holding the more or less minority opinion. He proposed about 3000 new species and 1500 new combinations, regularly making taxonomic and nomenclatural judgments that his contemporaries did not like. He was referred to as the "pest of systematic botany" of whose species 95% were not. Presently, however, over 70% of his species are accepted. This is not a terribly bad fraction. It is true that he was prone to splitting and impractically idealistic. However, I think, in total (especially considering the volume) his contribution (and probably encouraged by Jepson) that he was a master whose sacred words could never be improved upon. Enough editorials, let's proceed with the cataloging.

Of Jepson's contemporaries, Alice Eastwood is by far the next most important northern California botanist of the time. Eastwood was the long-term curator of the herbarium of the Californian Academy of Sciences. I find it interesting to read that in her day, women were expected to wear dresses at all times. Imagine having to walk over the Trinity Alps on a sort-of-trail, leading a mule, and wearing a dress. Eastwood cheated; she sewed a denim skirt which was buttoned down the front and back and which could be transformed into trousers. This was done when it was desirable to ride, etc. (Scandalous!)

After the 1906 earthquake, the Cal Academy building, including the herbarium, burned to the ground. But before it was destroyed, Eastwood managed to get to the 6th floor and lower about 1500 types (specimens on which new specimen descriptions have been based) down to the ground using horded pieces of string. She climbed back down and, with help, managed eventually to secure a place for the types in Fort Mason. This action earned her an image of being a bit of an epic heroine (and not just a good string saver). In addition to these anecdotes, Eastwood's contribution to California botany ranks very high indeed.

More or less contemporary to Jepson and Eastwood were many other people who walked the mountain paths picking up flowers as they went. Most were amateurs, a few were professionals. I will only touch on the more important ones; even so, I think it is good to put their activities in perspective—in a ladder of importance, they would be many rungs below either Jepson or Eastwood.

From the time of Greene until 1961, Milo Samuel Baker studied northern California plants. He taught at a series of high schools and eventually Santa Rosa Junior College, collected, and cataloged extensively in our area.

Two amateurs who collected heavily in the eastern part of the Northcoast were Elmer Ivan Applegate and George Dexter Butler. Applegate was primarily a Oregon plant person, but he regularly got into the Siskiyou. Butler had an interest in plants as a young man, but it was not until 1906, at 56, that bought a second-hand copy of one of Jepson's floras. After that, for the last four years of his life, he collected intensely out of Yreka.

Jumping to the coast, we find the name Joseph Prince Tracy. Tracy was born in Humboldt Co., died in Humboldt Co. (1879-1953), and throughout most of his life collected and studied flora. He went to school at Berkeley where one of his professors was Jepson (though Jepson, unlike Greene, was not a very dedicated teacher and generally turned all the work over to graduate students). In Tracy's last year in college his father died, and he was obliged to return home to support the family. He collected out of Eureka for the rest of his life. In 1931 Harold Ernest Parks, an amateur
fungi person, moved to Trinidad. Tracy and Parks separately and together made thousands of very important collections including numerous new species and range extensions.

Eastwood and Jepson both influenced many other collectors. Both of them inspired Ruby and Arthur Van Deventer. The Van Deventer house was for many years a hub of botanical activity. A number of more or less minor collectors deposited about 3500 specimens in the Van Deventer herbarium (that material is now at the Humboldt State University Herbarium). In addition to collecting, Ruby Van Deventer also busied herself writing Flora of Del Norte, which Jepson had convinced her to assemble. She seems to have been content to follow the "pontifex" Jepson—-with the exception of the location information, Ruby Van Deventer's flora is largely copied out of Jepson's works, and has never been published. However, the collections made by the Van Deventers and their friends represent a considerable contribution to the knowledge of plants in our area.

I've tried to limit my scope to "early" plant people which generally means dead ones; however, there are two people from the early era that are still living. Doris K. Niles (nee Gillespie) studied the Siskiyou for her dissertation (A Botanical Survey of the Siskiyou Mountains of Northern California & Southern Oregon). And finally, John Thomas Howard made many botanical forays in our area, often accompanying Eastwood. He succeeded her as curator at Cal' Academy, and has never ceased to be an active botanist.

To conclude this little catalog of botanical heroes, I will make a few closing comments about how I have come to view them. One thing I was rather shocked to find was that early botanists were NOT, for the most part, conservationists. For instance, in 1902 Eastwood went on a trip into Trinity Co. She later wrote with great excitement, "On the opposite side of the stream ... was a big cinnamon bear, not fifty yards away. ... Mr. Berry had only a 38-caliber Smith & Wesson,
but he shot at the beast and really hit him.* The bear managed to get away, but the point is that Eastwood, botanical heroine etc., had no qualms about shooting a bear that was minding its own business. Incidentally, judging from the word "cinnamon", the bear was probably a California Grizzly, a subspecies which became extinct in the twenties, but I won't blame her for overlooking that distinction.

The first of our botanists really to worry about the environment was probably Jepson in his later years. He was, for example, the founder of the Save-the-Redwoods League. Mason wrote of Jepson, "He was a native son who never quite forgave the march of progress for its inroads on the pristine landscape that was early California." Anyway, my point is that we should not think our own ethics were necessarily those of our botanical heroes. These people were real people with real human flaws. Menzies didn't get off the boat. Brewer was in favor of shooting hostile Indians. Even Jepson asked for a certain amount of unscientific obedience. They made mistakes (some more than others), but I have a certain amount of forbearance especially when (as in the case of Greene) he who made the mistake also correctly interpreted some 2000 new plants.

So what is the bottom line? What were these people like? My answer is that they were an astoundingly diverse group: raga-muffins and gentry, neurotic scribblers and string savers, united by one thing only--plants. They walked in the wild woods, and saw many plants, and recorded many things they saw, and this is why we have some modest understanding of our flora. And this is why they are the botanical heroes of the Northcoast.

* I invite comment on any major botanists that I may have overlooked. I would like to extend my gratitude to J. P. Smith, John Sawyer, and all the others who have helped. ** For a copy of this article with complete citations, sent $1.00 to the editor; p.pd.