

Final Report to the American Vineyard Foundation (April 2001)  
**California Competitive Grant Program for Research in Viticulture and Enology**

Project Title: "Curation of the UC Davis Viticulture Herbarium, Saving an Invaluable Teaching and Research Resource" (V102)

Principle Investigators: Ellen Dean, Section of Plant Biology, UC Davis and Andrew Walker, Department of Viticulture and Enology, UC Davis

**Objectives:**

Funding was requested to save the UC Davis Viticulture Herbarium, a collection of wine grape cultivar specimens (branches, leaves, and tendrils) that are valuable for teaching and research in viticulture and enology. Herbarium specimens consist of a dried and pressed plant sample mounted on paper with an associated label which includes information on the name of the plant, the location and date of collection, and the collector's name. Such specimens are a historical record of where and when particular plants have grown. They can be used to study the morphology of the plant (how the leaves, stem, tendrils, and flowers look), to extract DNA for various types of studies, or for historical verification of what plant was actually used in a particular study.

The UC Davis Viticulture Herbarium consists of two main collections. The first collection is the original viticulture herbarium, ca. 1000 specimens dating from 1885 to the 1920s (pre-prohibition era), which document an impressive number of the wine grape cultivars grown in California at that time (collected from both vineyards and agricultural stations). The second collection is that of Harold P. Olmo and his assistant Albert Koyama; their specimens were collected between the 1930s and the 1960s and document the grape cultivars that they collected from a number of countries in Europe, the Middle East, Asia, and South, Central, and North America (including California).

At the time this project was funded, the folders (and associated labels) of the original viticulture herbarium were crumbling, and we were in danger of losing the label information stating the cultivar name and location and date of collection. In addition, the collections of Olmo and Koyama had never been labeled or mounted on paper, and we were in danger of losing their collection information, due to the advanced ages of their collectors. **Our objectives were to: 1) repair the original viticulture herbarium specimens, making sure that their label information is preserved for future generations of viticulturalists; 2) work with Dr. Olmo and Mr. Koyama to extract information from their notebooks, so that their herbarium specimens are labeled and available for future workers.**

**Summary of Accomplishments:**

The project was carried out at the UC Davis Herbarium between October 2000 and March 2001. The major expenses of the project were as follows. Ms. Katherine Borland, a master's student of Andrew Walker in Viticulture and Enology, was hired to work 10 hours per week as a Research Assistant during the fall and winter quarters (from October to the end of March). Her benefits included a tuition waiver, which is part of all graduate assistantships. In addition to Kate, we hired a number of undergraduate student

assistants to work part-time on repairing the original viticulture herbarium specimens. New archival quality folders and other mounting supplies were purchased for the specimens.

Kate Borland proved to be an excellent person to carry out the project. In curating the Olmo and Koyama collection, she communicated effectively with Olmo and Koyama, deciphered their collection notebooks, checked species and cultivar names in the appropriate literature resources, typed collection data for nearly 2,000 specimens into our Access label-generating database, generated the labels on archival-quality paper, and placed the new labels with the correct specimens. I have appended a report of the label data from the *Vitis vinifera* specimens that Kate databased. You can access the other records in our database through our Website <http://herbarium.ucdavis.edu> (at the site, click on databases, then query type specimens and general collections, then at the bottom of the page choose “species” and click select and continue, then choose the family Vitaceae and the genus *Vitis* and click search). The Olmo and Koyama specimens still require mounting onto archival paper. We bought the supplies to mount these specimens (archival paper, glue and linen tape), but we ran short on funds to hire the undergraduate students to mount them.

For the original viticulture herbarium, Kate cut the original labels off their crumbling folders, xeroxed them onto archival-quality paper, and placed the new labels with the specimens. Undergraduate students then glued the new labels onto archival folders and placed the pressed specimen into the folders, securing them with linen tape. We did not glue these specimens, so that they can be used easily by future researchers for both morphological and molecular studies. The folders that we chose were ordered from Pacific Paper and were more expensive than we had originally budgeted. They are large (17 x 24 inch) folders that are nearly acid free and will last for several hundred years. They were the most economical folders that we could find, but were still rather costly.

### **Significance:**

We succeeded in saving a major portion of the UC Davis Viticulture Herbarium, so that it will be available for use by future researchers in viticulture and enology. This important herbarium documents much of the living *Vitis* that has been grown at UC Davis and elsewhere in California and will serve as an historical resource should questions about the identity of particular cultivars arise. In addition, it is an important teaching resource for students of viticulture who wish to learn the morphology of particular grape species or cultivars (Katie learned an enormous amount curating them). Finally, the specimens can serve as a source of DNA for future molecular studies.

**Publications or Reports:** There were no publications or reports for this project. However the data that we typed into our database in order to generate labels for Dr. Olmo and Mr. Koyama’s collections are available on our Website as explained above.

**Expenditure of Funds:**

Salary, Katherine Borland:	\$3,639
Tuition Waiver, Katherine Borland:	\$2,768
Salary, Undergraduate Assistants:	\$1,304
Supplies	\$2,883
Employee Liability	\$ 37
 Total	 \$10,631