

## THE MELBOURNE HILLEBRAND COLLECTION OF HAWAIIAN PLANTS

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Dr. Wilhelm Hillebrand, a Prussian physician and amateur horticulturalist, traveled to Hawaii in 1851 in search of a climate suitable for his bad health. During his 20 years in Hawaii, he became director of Queen's Hospital and personal physician to the royal family. Many of his garden plantings on Vineyard Street are growing today in the Foster Botanical Garden. He also collected, dried, and identified plants found on hiking trips or brought to him by friends. When he returned to Germany in 1871 he took these dried plant specimens with him and began to write a flora of the islands. His book "Flora of the Hawaiian Islands" was published in 1888, two years after his death.

In his flora he described many new taxa based upon these dried plants. These "type" plants are particularly important when one is referencing plants for their proper identification and serve as "the source" specimens for that species description. Upon Hillebrand's death, his specimens were bequeathed to the Berlin-Dahlem Museum, which was destroyed and burned in the second World War in an allied bombing raid. Only plant duplicates and/or plants on loan to other herbaria survived.

Dr. David Churchill, director of the Royal Botanic Gardens and Government Botanist of Victoria, visited Hawaii in 1978 as part of the Captain Cook Hawaii Bicentennial. He surprised the Hawaiian community by telling of a "duplicate collection" of Hillebrand's plants in Melbourne. He informed us that Dr. Hillebrand collected plants in Australia for about three months with an old school friend on his way to Hawaii in 1851. His school friend, although trained as a pharmacist, became a renowned botanist with a title of Baron Sir Ferdinand von Mueller. As the first director of the Royal Botanic Gardens and Government Botanist in Melbourne, Baron von Mueller corresponded and received plant specimens from various expeditions and islands throughout the Pacific until his death in 1896 (Honolulu Advertiser, 1978). He and Dr. Hillebrand had a lively correspondence and exchange of plant materials.

The size and importance of the Hillebrand Melbourne collection was not known. Therefore, I spent two weeks (22 July - 5 August 1981) inventorying and photographing the collection before attending the 13th International Botanical Congress in Sydney. Dr. Churchill was most accommodating in obtaining personnel and needed equipment for this task. Most of the specimens were still filed unmounted in the Polynesian collection as left by von Mueller in 1896. The search was undertaken mainly using scientific names from Hillebrand (1888). Additional search

time was spent on Hawaiian genera that had proposed threatened, endangered or extinct taxa. From a record book showing plant genera von Mueller received, I cross-referenced the genera received with those found. A search for outstanding genera is presently underway. (This search may yield + 30 specimens to be photographed and sent to me.)

All specimens located by August 1, 1981 were mounted and photographed using black and white 35mm Kodak Plus X film, a Pentax camera, and tripod. Two sets of 8 x 10 inch glossy prints are being developed from the film negatives--one set to go to Bishop Museum and the other to the Hawaii Division of Forestry and Wildlife.

Hillebrand's specimens are insect free and in excellent condition. Of 569 sheets photographed, 385 are flowering plants (angiosperms) and 184 are ferns or fern allies. Three hundred and fifty-eight angiosperm sheets are separate taxa; however, more duplicates are present in the fern collection. Of the photographed flowering plants, there are approximately 103 isotypes and 59 considered for endangered, 15 for threatened, and 27 for extinct status (Ayensu & DeFilipps, 1978). The scientific names on the herbarium sheets have been cross-indexed with the name Hillebrand used in his book and its current accepted name. Dr. Harold St. John has graciously provided current names for the angiosperm photographs and Dr. Charles Lamoureux is providing current names for the fern photographs. These names will be entered into the Wang computer for printout.

The goals of this inventory are to: (1) establish what Hillebrand specimens are available for loan at Melbourne, (2) publish the plant listing for other people's use, and (3) use the photographs wherever possible to reduce wear and tear of these irreplaceable specimens. Some may be the only collection made of a plant now considered extinct.

People desiring a printout of Hillebrand specimens found at Melbourne and/or wanting particular prints should contact me at the Hawaii Division of Forestry and Wildlife, 1151 Punchbowl Street, Honolulu, Hawaii 96813, telephone no. 548-2861.

#### Literature Cited

- Ayensu, E. S. & R. A. DeFilipps. 1978. Endangered and Threatened Plants of the U.S. Smithsonian Institution/World Wildlife Fund, Inc. pp. 197-224.
- Hillebrand, W. F. 1888. Flora of the Hawaiian Islands. Heidelberg.
- Honolulu Advertiser. Wed. December 13, 1978. People Report: The answer to a botanist's prayer by Ronn Ronck.

Hillebrand then went to San Francisco and finally arrived in the Hawaii December 22, 1850. He stayed for a little over 20 years and made significant contributions that endure to this day. He was able to speak the Hawaiian language as well as German , English , Latin , and French . [1]. San Francisco.Â ^ "Oahu marriage record 1832-1900". state archives digital collections. state of Hawaii. Retrieved 2010-01-09. ^ "The Queen's Medical Center". web site. Retrieved 2010-01-09. ^ "Hillebrand, Dr. William office record". state archives digital collections. state of Hawaii. Retrieved 2010-01-09. ^ Winnie Singeo (May 6, 2005).Â William Hillebrand. Flora of the Hawaiian Islands : a description of their phanerogams and vascular cryptogams . Williams & Norgate. Ursula H. Meier.