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About the Institute

The Hunt Institute for Botanical Documentation, a research division of Carnegie Mellon University, specializes in the history of botany and all aspects of plant science and serves the international scientific community through research and documentation. To this end, the Institute acquires and maintains authoritative collections of books, plant images, manuscripts, portraits and data files, and provides publications and other modes of information service. The Institute meets the reference needs of botanists, biologists, historians, conservationists, librarians, bibliographers and the public at large, especially those concerned with any aspect of the North American flora.

Hunt Institute was dedicated in 1961 as the Rachel McMasters Miller Hunt Botanical Library, an international center for bibliographical research and service in the interests of botany and horticulture, as well as a center for the study of all aspects of the history of the plant sciences. By 1971 the Library's activities had so diversified that the name was changed to Hunt Institute for Botanical Documentation. Growth in collections and research projects led to the establishment of four programmatic departments: Archives, Art, Bibliography and the Library.

THE BOTANICAL GAZETTE

EDITOR: JOHN M. COULTER

SEPTEMBER 1925

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THE GAMETOPHYTE OF *LYCOPodium CERNUUM*
IN HAWAII*

OTTO DEGENER

(WITH PLATES IV-VII AND TWO FIGURES)

Hawaii National Park, but a few hours' ride from the city of Hilo, is situated at an elevation of 1200 m. on Mauna Loa, an active volcano. Here, within an area of 10-20 sq. km., may be found every type of habitat, ranging from that of the bare glassy flows of "pahoe-hoe" lava in the crater of Kilauea, or the Kau Desert, to that of the humid tree-fern forest. Near the brink of the crater itself is a series of earthquake crevices from which steam continuously rises. This extends about 1.5 km. from a region of volcanic ash, upon which a few stunted plants of a peculiar Hawaiian composite and of a heath manage to exist, to an area thickly covered by an almost impenetrable tangle of vegetation. The conspicuous species characteristic of the latter luxuriant type of vegetation are the tree *Metrosideros polymorpha* Gaud.; a small tree-fern of the endemic genus *Sadleria*; *Gleichenia dichotoma* Hook., which clammers over any support to a height of 30-45 dm.; and *Lycopodium cernuum* L., which forces itself up through the underbrush and frequently rises to a height of 15 dm.

In December 1922, the writer, searching for the gametophytes of club mosses, noticed several sickly plants of *Lycopodium cernuum* at the brink of a stream crack in the area known as the Sulphur Bank. Upon observing these plants more closely, a few small sporelings were discovered on the sloping sides of the crevice. With this clue as to the type of locality in which the gametophyte of the species might be found, similar situations were investigated. Thousands of young sporelings and gametophytes were discovered, but since the circumstances under which these plants were growing can be duplicated only in a region of volcanic activity, stations not influenced by subterranean heat will first be described.

* Contribution from the Department of Botany of the University of Hawaii.

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