

## FIFTEEN YEARS OF IN-SITU CONSERVATION AT MACCHU PICCHU

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**ABSTRACT.** Eco-tourism in Peru provides the opportunity for orchid conservation by such means as an orchid garden established at a private hotel in 1988 within the Historic Sanctuary of Macchu Picchu, Peru.

**Key words:** CITES, Peru reglamento de conservacion de orquideas, eco-tourism

### INTRODUCTION

Beginning with the early Botanical Expedition of King Charles III of Spain in 1778 to the Central Andes of Peru, orchids native to these regions were collected and studied by the young botanists Hipólito Ruiz López and José Antonio Pavón. They explored these areas rich in orchids from 1778 to 1888, and most of their herbarium specimens are still in Madrid. As early as 1830, commercial firms were interested in the Peruvian discoveries; as Frederick Sanders of Sanders, Veitch, and Linden had two orchid hunters assigned exclusively to Peru. This commercial firm and others offered and advertised new and exotic Peruvian species.

In the 20th century, over-collecting of orchids for commercial and scientific studies was surpassed only by clearance of land for agriculture, lumbering, and accidental or provoked fires, in the name of “progress.” The Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) came into force in 1975 to control global traffic of wild flora, including orchids. “CITES is the best law for protecting animals, but is the worst for protecting orchids . . .” says orchid taxonomist Eric Christenson. Peru, along with many countries, signed CITES and, for the past 25 years, has worked to accomplish what the spirit of CITES suggests to each country for the protection of their orchid flora. In the 1980s, officials from the Agriculture Ministry in Peru began studying new regulations for the trade of wild plants and animals. Agriculture officials called for a commission to study the issue. The result of this 3-year effort was the Reglamento de Conservacion de Orquideas, signed and published in December 1991. This new Orchid Conservation Law (Agriculture Ministry 1991) has been a major step in conserving orchids in Peru.

### METHODS: ECOTOURISM

By 1988, a projected tourist facility at Macchu Picchu already was dealing with orchid plants that were being removed from their orig-

inal sites for construction. More plants were saved from fires, floods, archaeological clearances, and land development for tourism, electric power plants, and railroads. A private hotel was being constructed, and its visionary owner, Jose Koechlin, proposed that the author join him in an effort to establish a rescue center for plants, including orchids, on the hotel grounds. The center would recognize, classify, and reset rescued plants in a natural facility open to tourists visiting the famous ruins of Macchu Picchu.

The eco-tourist concept of a self-sustained orchid garden was clear from the start. Government officials were challenged to put into practice what the spirit of CITES and the new Orchid Conservation Law were saying. These officials understood the project and approved the design and setting of The Orchid Trails at Macchu Picchu Pueblo Hotel. International awareness of the Macchu Picchu orchid garden was promoted and guidelines for it were obtained through consultations with the Marie Selby Botanical Gardens in Sarasota, Florida. Selby Gardens offered to train a hotel staff person in its well-known Internship Program for a period of 12 weeks, September–November 1989. When the idea was proposed to the American Orchid Society, that group kindly offered its support. The *AOS Bulletin* published an article on the plant rescue center project (Rolando 1990), stating, regarding the goal of the Orchid Garden, that, “The lost orchids of the Lost City of the Incas may yet return . . .”

After 15 years of field research, rescue, and reset of orchids and native plants, the project still in development may have the largest and most comprehensive naturalistic orchid display open to the public in Peru. In August 1988, after initial field studies at the hotel construction site, we had begun planning for the Orchid Trails adjoining the hotel sidewalks. From September to November 1989, the author was enrolled in the Selby Gardens Internship Program to learn about landscaping with orchids, as well as micropropagation, orchid taxonomy, and herbarium research.

In 1995 the design of a natural orchid walk

on the hotel grounds resulted in the Imperial Orchid Trail with 13 stations for observing orchids in a wild environment. Meanwhile plants rescued from fires or "cleaning" at new ruins discovered in the Historical Sanctuary of Macchu Picchu were being vegetatively propagated. The orchid collection of the hotel Gardens, by November 1998, consisted of more than 1000 plants of 140 species in 48 genera. The effectiveness of the Rescue Center Project relies on the experience gained in conserving orchids on privately owned land within a protected area, such as the Historical Sanctuary of Macchu Picchu. Orchids in danger have been rescued to teach local people and tourists coming from all over the world how to treasure this natural heritage and how to convert it into a sustainable resource as a natural attraction with paid visits by nature lovers. In 2004, the collection consists of 372 native orchid species.

### CONCLUSION

The main goal of orchid conservation needs to be education for official and public awareness. Field research, conducted to better understand what we are going to protect must be a priority in any orchid conservation project. If we can turn orchid hunters (commercial and scientific) into true educators, if we are able to recognize new species, to rescue and propagate them, and to share our natural heritage with all nature lovers, then we will realize that conservation begins with education.

### LITERATURE CITED

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