

## ORCHID CONSERVATION IN PERU: THE NEED FOR TAXONOMISTS TO ASSIST LOCAL AUTHORITIES WITH PLANT IDENTIFICATION

RICARDO FERNÁNDEZ

Herbario San Marcos, USM Museo de Historia Natural, Apdo. 140434, Lima 14, Peru.  
Email: rforchid@hotmail.com

**ABSTRACT.** Peru has ca. 2500 species of orchids and a deforestation rate of 300,000 ha per year. Local authorities need help from taxonomists in recognizing and identifying orchids and other plant species if they are to control over-collecting in the wild and plant smuggling, both illegal in Peru. Illegal orchid greenhouses register with the government and operate as if legitimate. More accredited laboratories are needed to propagate native orchids by in-vitro culture. Many of Peru's orchid species are new to science, and if conservation is not practiced, many will only be known by their herbarium specimens.

**Key words:** deforestation, slash and burn agriculture, ex-situ propagation, in-vitro culture

### INTRODUCTION

Peru has ca. 2500 species of orchids, with undoubtedly many more yet to be discovered. They will no longer be available as valuable, living germplasm, as they will be lost to ill-advised habitat destruction, in particular, to the slash and burn techniques of itinerant agriculture and the selective and excessive depredation by commercial collectors (R. Fernández unpubl. data).

In Peru, the deforestation rate is 300,000 ha per year (Collantes 1998). In areas of destroyed forests, the rescuing of orchid plants is regulated by the Peruvian National Institute of Natural Resources (INRENA 2004). Despite the criticisms of a few orchid connoisseurs in Peru, authorities currently are incapable of implementing an effective orchid conservation program.

Although it is illegal in Peru to extract orchids from the wild (Ministerio of Agricultura 2001, Collantes 1995), it is too easy for commercial exporters to exploit the indigent rural people to over-collect many of the commercially desirable species. These rural people may know that it is illegal, but they still collect, because it is the only means they have to provide for their families. Another issue is the uncontrolled transport of living orchids within Peru. Effective control is hampered, in large part, by a lack of knowledge regarding recognition and identification of orchids and other plant species by the appropriate authorities. Taxonomists are needed to assist local authorities in minimizing plant smuggling and the mislabeling of species at Peru's borders and ports.

### METHODS

Only a few commercial orchid greenhouses are registered in Peru. The authorities need to promote the establishment of more registered greenhouses to undertake a massive propagation

of native species. By contributing to ex-situ conservation, such propagation would decrease the demand for orchids collected in the wild and would relieve the current pressure being placed on these species. Another problem is that illegal orchid greenhouses, known as "centros de acopio", may register at Inrena and continue to conduct business as recognized, legitimate orchid nurseries.

Peruvian authorities are working to compile a more complete and up-to-date orchid list for the re-categorization of many orchid species with emphasis on the vulnerability of each species. To do this, however, more intensive population and habitat studies urgently are needed.

Some botanical laboratories and a few operating in the provinces are propagating native orchid species by in-vitro culture. These laboratories need to join together in a coordinated effort to propagate the more vulnerable species. Ideally, propagation would only be allowed by orchid seed flask methodology in accredited laboratories. Healthy plants from this method would then be available to export around the world.

Many of Peru's orchid species are new to science, and if conservation is not practiced, many will only be known by their herbarium specimens.

### LITERATURE CITED

- Collantes, B. 1995. Conservación, panorama de la orquideas en el Peru. Bol. Asoc. Peruana de Orquideología 1(1): 16-17.
- . 1998. Orquideas del Peru en peligro. Rumbos Año 3(13): 6-41.
- Ministerio of Agricultura. 2001. Reglamento de la ley forestal y de fauna silvestre. Pp. 201105-201146 in *El Peruano*, Normas Legales, D.S. No. 014-2001-AG. Inrena, Lima, Peru.
- INRENA. 2004. Website of the Peruvian Instituto Nacional de Recursos Naturales Published on the Internet. <http://www.inrena.gob.pe>