

EVALUATION OF ANDEAN *LUPINUS* SPECIES TO BE INCORPORATED IN THE IUCN RED LIST OF ENDANGERED SPECIES

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INTRODUCTION

The Andean Lupine (*Lupinus mutabilis* Sweet), known by the common names tarhui, tarwi or chocho is a native species to the Central Andes. It was cultivated and improved by the Inca civilization and currently is cultivated in Ecuador, Peru and Bolivia, between 2500 and 3800 m above sea level, for its grain with high nutritional protein and oil contents. As its scientific name indicates, *L. mutabilis* has a great capacity to mutate; consequently, several wild breeds are part of a gene pool with random intercrossing. Within the framework of a program to assess the conservation status of South American crop wild relatives, a workshop was held in July 2018 with a panel of experts. They evaluated 29 species of *Lupinus* native to the tropical Andes of Bolivia, Peru, Ecuador and Colombia that are considered wild relatives of tarwi or chocho.



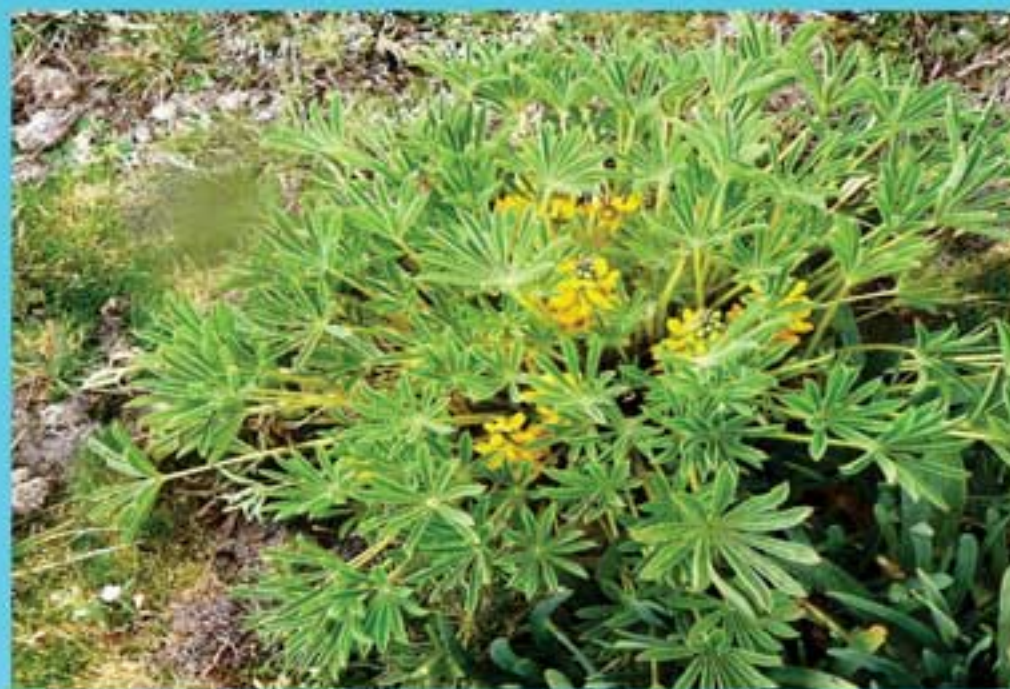
Experts working in the workshop



Lupinus weberbaueri Ulbr.



Lupinus tarapacensis C.P.Sm.



Lupinus chrysanthus Ulbr.



Lupinus mutabilis Sweet



Lupinus ballianus C.P.Sm.

MATERIALS & METHODS

The species assessed were:

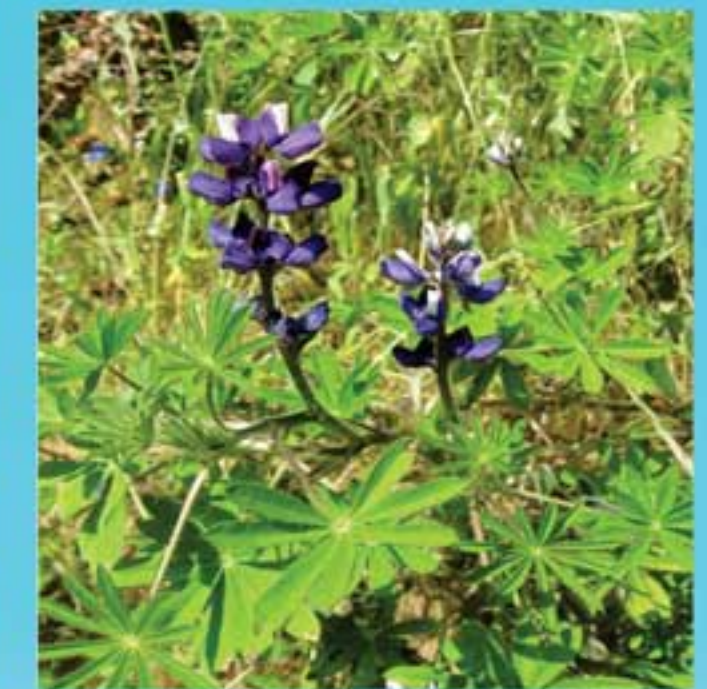
Lupinus arvensis C.P.Sm.
L. ballianus C.P.Sm.
L. bangii Rusby
L. bogotensis Benth.
L. chachas Ochoa ex C.P.Sm.
L. chrysanthus Ulbr.
L. ellsworthianus C.P.Sm.
L. huaronensis J.F. Macbr.
L. huigrensis Rose ex C.P.Sm.
L. lindleyanus C.P.Sm.
L. mantaroensis C.P.Sm.
L. microphyllus Desr.
L. misticola Ulbr.
L. mollendoensis Ulbr.
L. mutabilis Sweet
L. nubigenus Kunth
L. piurensis C.P.Sm.
L. praestabilis C.P.Sm.
L. prostratus J. Agardh.
L. pubescens Benth.
L. pulvinaris Ulbr.

L. purosericeus C.P.Sm.
L. ramosissimus Benth.
L. semperflorens Hartw, ex Benth.
L. solanagrorum C.P.Sm.
L. tarapacensis C.P.Sm.
L. tomentosus DC.
L. tominensis Wedd
L. weberbaueri Ulbr.

The IUCN Red List Categories and Criteria were used to assign the species to the different categories:
 Not evaluated (NE)
 Data deficient (DD)
 Least concern (LC)
 Near threatened (NT)
 Vulnerable (VU)
 Endangered (EN)
 Critically endangered (CR)
 extinct in the wild (EW)
 Extinct (EX).



Lupinus mollendoensis Ulbr.



Lupinus lindleyanus C.P.Sm.

RESULTS & DISCUSSIONS

The results show that of the 29 species, none is considered Critically endangered (CR), one falls into the category of Endangered (EN); two species are considered Vulnerable (VU); two others fall into the category of Near threatened (NT); and the rest of species are Least concern (LC). Unfortunately, four species lacked enough data to be assessed and fall in the category of Data deficient (DD).

Acknowledgements: The authors are grateful to the International Union for the Conservation of Nature (IUCN) for the organization of the workshop, Rainforest Trust for travel aid support and to the Oak Spring Garden Foundation for the support and all the attentions received during the working week in its dependencies. Plant photographs by Paúl Gonzáles