

AMENDMENTS TO APPENDICES I AND II OF THE CONVENTION

A. PROPOSAL

Transfer of the coastal population of Chile of Fitz-Roya cupressoides. (From Appendix II to Appendix I)

B. PROPONENT

The Argentine Republic.

C. SUPPORTING STATEMENT

1. Taxonomy

11. Class: Conifera
12. Order: Coniferales
13. Family: Cupressaceae
14. Species: Fitz-Roya cupressoides (Mol.) Johnst.
15. Common Names: English: Chilean false larch
French:
Spanish: Alerce, Lahuen

16. Code Numbers:

2. Biological Data

21. Distribution: In Argentina, this tree is found in the Provinces of Rio Negro and Chubut: between Puerto Blest and Laguna Frias as well as in the Cascada Los Alerces.

Along nearly the whole of the Rio Azul (Chubut) specimens of Chilean false larch can be seen on the banks, always on the borders of this river, and there are scattered specimens as far as some three kilometres to the West of the town of El Bolson; this point is very interesting because it indicates that these are among the few places in which a favourable forest environment still exists for this species which is obviously receding on our side of the Andes. On the banks of the Rio Turbio, to the South East of Lake Puelo, there are continuous masses of larches extending up to the actual banks of the river, on the rolling countryside to the South up to a height of 600 metres.

In a personal communication from Lic. Claudio Chehebar it was reported that there are larches in Cholila Lake and in the Alejandro and Tigre rivers.

The vegetation map for the Los Alerces National Park drawn by Mrs. Lic. Nora Prudkin indicates that the species is to be found along the North and South branches of the Menéndez Lake and the banks of the Los Alerces river.

In Argentina, the species is distributed in the Andean region between lat. 42° and 43° S. and long. 71° and 72° W. In Chile, the species is to be found in three ecosystems corresponding to three

physiographical units: Cordillera de los Andes, Depresión Intermedia and Cordillera de la Costa. The species has now disappeared from the central depression and only scattered remnants can still be found in the coastal Cordillera and in the Andes. In the coastal range (Cordillera de la Costa) they are to be found between lat. 40° and 41°21' S. and between lat. 42°22' and 42°27'S. In the Andes Cordillera they are found between lat. 41° and 42°37' S., where some clusters exist in border areas and in shared biogeographical areas.

22. Population: The tree populations in Argentina are dispersed and a few specimens grow in isolation; the exact area occupied by the species is not known, nor is the number of trees.

The Chilean proposal made in 1985 quotes the Catastro survey carried out by the University of Chile in the summer of 1982-83, on instructions from the Ministerio de Agricultura; the results of this survey showed an area under the species of 303,799 ha, which included both the areas in the coastal range and those in the Andes. However, a detailed analysis of the data published in that survey reveals that 41.1 % of the area (124,796 ha) has a maximum density of one tree per hectare and that 31.7 % (96,348 ha) present surfaces in which the species covers less than 50 % and that 9.2 % (28,030 ha) has only dead trees. All this means that the real area actually under the species is only 54,625 ha, i.e. 18 % of the area in which the species predominated in the past and in which there are left only some remnants which are incapable of regeneration and self-perpetuation. More seriously, it has been demonstrated that in these 54,625 ha there is no active reproduction; this confirms the observation made by Veblen (1976) regarding most of the populations of the species, maintaining that its regeneration will prove extremely difficult.

This species, because of its extremely slow growth, comes under heavy pressure from the broad-leaf species. It grows slowly: 1 mm annually. It has the greatest longevity among all our dendrological flora. A cross section cut from the trunk of a 3 m high tree recently felled showed 3,000 growth rings, quite regular in shape, indicating probably an age of 3,000 years in a well defined climate such as that of its habitat. There are specimens having an even greater diameter. The percentage germination of its seeds is not known, nor the detailed bio-ecological formation, because of the scant research which has been conducted on the species both in Argentina and in Chile. The above-mentioned 54,625 ha represent a very small area for purposes of the survival of the species because of the illegal exploitation and the danger of destruction by forest fires, which - according to official figures - destroyed in Chile in the summer of 1984 no less than 73,000 ha of natural vegetation as a result of man-made fires - i.e. 1.3 times the area under the species. In the summer of 1985, a single man-made fire destroyed more than 13,000 ha of the Torres del Paine National Park.

23. Habitat:

231. Location: The species often grows in the deep valleys. The fact that these valleys run in a crossways direction enables the vegetation to benefit from the humid currents of the Pacific Ocean, whose humidity is carried by the prevailing

western winds together with other species, namely Pilgerodendron uviferum, Saxegothaea conspicua and Podocarpus nubigena. It is also to be found in peat bogs partly covered by Sphagnum in which the fallen trunks can survive for centuries, with the poor drainage and the presence of surface water. Near Lake Menéndez and in the vicinity of Puerto Blest, the large woods in these bogs contain other species such as Nothofagus dombeyi and many others from the Valdivia forest.

Another habitat is to be found in the hillsides near the limit of the woodlands. In the southern branch of Lake Menéndez, larches are to be found above the belt of N. dombeyi. The vegetation of larch woods has many species in common despite the diversity of its habitat; this indicates soil acidity.

232. Characteristic Features:

a) Climate: Common to both subtypes: temperate oceanic. The temperatures are moderate without any great variations. In the coastal sector, average precipitation is 2,000 mm while in the Andean sector it is 4,000 mm.

b) Altitude: Different for the two sectors.

Coastal: The larch grows between 600-1,000 m above sea level and up to the highest peaks. The area is marked by a total absence of volcanoes and their influence.

Andean sector: The species grows up to 1,200 m above sea level. This mountain range reaches heights of over 2,000 m and is substantially higher and more abrupt than the coastal range; it includes a number of volcanoes.

c) Soils: The species occupies marginal soils with decomposed and semi-decomposed organic strata.

The two sectors have their origin in very different conditions and different materials.

Coastal sector: The northern sub-sector of the coastal range, whose soils are derived from metamorphic rocks which are highly meteorized under mica stone; on the other hand, in the southern sub-sector, the soil consists of semi-podzolized marine sediments and acid pH.

Andean sector: The species grows in broken ground with 20-80 cm soils generally derived from volcanic ash deposited over non-meteorized granite rocks and fluvio-glacial deposits; poorly drained acid soils with evidence of washing and podzolization. In the higher areas, near the volcanos, the species grows on volcanic slag or on rocky surfaces.

d) Phytogeography: In the Andes, between 700 and 1,200 metres above sea level the species grows in association with Nothofagus dombeyi, Drimys winteri, Podocarpus nubigenus, Nothofagus betuloides and N. nitida. In the lower ground,

the larch species becomes gradually scarcer. Other species predominate. The Andes underwood is marked by the presence of the Chusquea nigricans, Drimys winteri var. andina, Desfontainea spinosa, Maytenus magellanica, ferns and grasses.

In the coast, the trees form woods and is the most important species and the dominant canopy. In this habitat, the larch is not associated with N. dombeyi as in the Andean sector; other species of Nothofagus, however, are to be found in both sectors. Below 200 m above sea level the larch becomes increasingly scarcer until it ultimately disappears.

3. Trade Data

31. National Utilization: The species produces straight grain wood which is easy to split with an axe, besides having a high resin and tanin content which increases its durability; for these reasons it is one of the most widely used in the region for making roof tiles. It is also used for making resonance boxes for guitars, resonance covers for pianos, harmonic lids for violins and cellos; because of its low specific weight, this wood, when dried very well, makes it possible to obtain particularly acute sounds.

Its colour - rose brown - its malleability and lightness makes it suitable for the manufacture of pencils.

The tree tops can rise up to 25 metres. It is the native species of largest size and greatest longevity.

In Argentina, the larch wood which comes into the market is mainly Chilean wood. In the years 1984-85 1,018,228 square feet of this Chilean wood entered the Argentinian market (Odepa, 1986).

32. Legal International Trade: The fact that the coastal population of the larch is placed in Appendix II permits international trade in it, subject to the rules laid down by CITES.
33. Illegal Trade: The fact that these coastal populations of larch are placed in Appendix II is a great impetus to the unlawful trade in the species because it is impossible to distinguish the wood of the two populations. Moreover, according to the official export statistics of Chile, trade is carried out both in the wood from the coast and from the Andean areas, all of it allegedly from dead trees - an allegation which is not admitted by CITES. To this the fact must be added that it is not at all certain that the provisions of the Convention are being observed prior to the export of the wood from the coastal sector; lastly, certification is inadequate with respect to wood stocks declared as pre-CITES, which are the only ones allowed to be marketed.
34. Potential Trade Threats: So long as it is possible to export the wood obtained from any of the populations, the danger will continue and will even increase, mainly in respect of:

341. Live Specimens: according to scientific reports received from Chile, live specimens are being cut down illegally in that country and there are also practices such as "ringing" to kill standing trees and "pricking" i.e. an excision in the trunk to ascertain whether the wood is suitable for making tiles. Besides, the operations for extracting dead wood also affect the live specimens by altering the drainage conditions of the soils as a result of the movements of machinery and pack animals.

4. Protection Status

41. National: A protection area has been established in the Los Alerces National Park bounded in the west by the Chilean frontier. Because of its character as a frontier national park and the pressure resulting from the exploitation on the Chilean Andean side, the Los Alerces National Park cannot ensure the continued existence of the larch species in Argentina.

A few scarce specimens are also to be found in the Nahuel Huapi National Park.

The Andean population is included in Appendix I of CITES.

42. International: In 1975, Chile acceded to CITES and included the species in Appendix I; this means that international trade in it is prohibited. In 1983, this protection diminished enormously when the coastal populations were transferred to Appendix II. This led to increased pressure of unlawful cutting on the coastal and Andean populations because in Chile there is no effective control policy and also because, as indicated above, there is a similarity between the woods derived from the various populations, both Chilean and Argentinian.

43. Additional Protection Needs:

- To strengthen international protection through co-ordinated conservation action by Argentina and Chile.
- To promote the observance of national standards of protection and legal control.
- To discourage international trade.
- To promote and support research programmes.
- To strengthen conservation in the existing national parks.
- To promote the setting up of new national parks both in Argentine and Chilean territory where the species is present.
- To introduce and cultivate the species in botanical gardens.
- To strengthen forest fire controls.
- To intensify the control of trade.

5. Information on Similar Species

The Japanese larch Larix leptolepis (Sieb and Zucc.) Gord is similar in height but its characteristics and its wood are very different. The red cedar (Juniperus virginiana) and redwood (Sequoia sempervivens Lambert Endicher) both from the United States, are exotic woods similar to the larch.

6. Comments from Countries of Origin

Fitz-Roya has only one species which is peculiar to a very well-defined sector of South America and exists only in Chile and Argentina, where it is the dominant species in certain ecosystems, many of which are shared across the frontier by the two countries, are very fragile and have very distinct characteristics; this gives the species great scientific, genetic, scenic and recreational value.

Because of the considerations set forth under point 22. above, the area at present under this species does not guarantee its continued existence.

7. Additional Remarks

As a result of a phytosociological study carried out by the engineers M. Dimitri and Correa Luna in a stand of Fitz-Roya cupressoides and Pilgerodendron uviferum situated between Puerto Blest and Laguna Fria of the Nahuel Huapi National Park (Río Negro), it was possible to ascertain the state of complete decay of the vegetation caused by the fact that the road built at the beginning of the century has prevented natural drainage towards the Río Frías. A considerable portion of the stand remained flooded and was invaded by Sphagnum magellanicum which can attain a thickness of 40 cm and more, thus preventing the seeds from germinating.

Various species present here have special forms of propagation and multiply by means of the rooting of lower branches.

As far as the Fitz-Roya cupressoides is concerned, although there are no altered or pristine communities, new plants are scarce apparently because of natural decay.

There are specimens up to 70 m high and 4.5 m diameter - a very important fact because it would indicate 4,500 years of age. Normally, the trees are 30 m high and 1-1.2 m in diameter. The flowers are uni-sexual and can be found in the same specimen or different ones. The bark is dark brown in colour, thick and smooth; when incised it exudes resin.

Studies carried out in Chile agree in concluding that the larch populations are being quickly depleted and altered because of over-exploitation throughout history (and to some extent until now) and because of the limited capacity for regeneration (Veblen and others, 1976; Veblen, Ashton 1982; Elizalde, 1970; Muñoz, 1971).

It is essential to carry out research on the cultivation and propagation of the species, so as to operate as a genetic bank capable of re-introducing the species in places where it can grow secure from predatory action.

A personal communication by the agricultural engineers Dimitri and Cozzo indicates that the species is in danger of extinction because of the destruction of its habitat and because of uncontrolled trade.

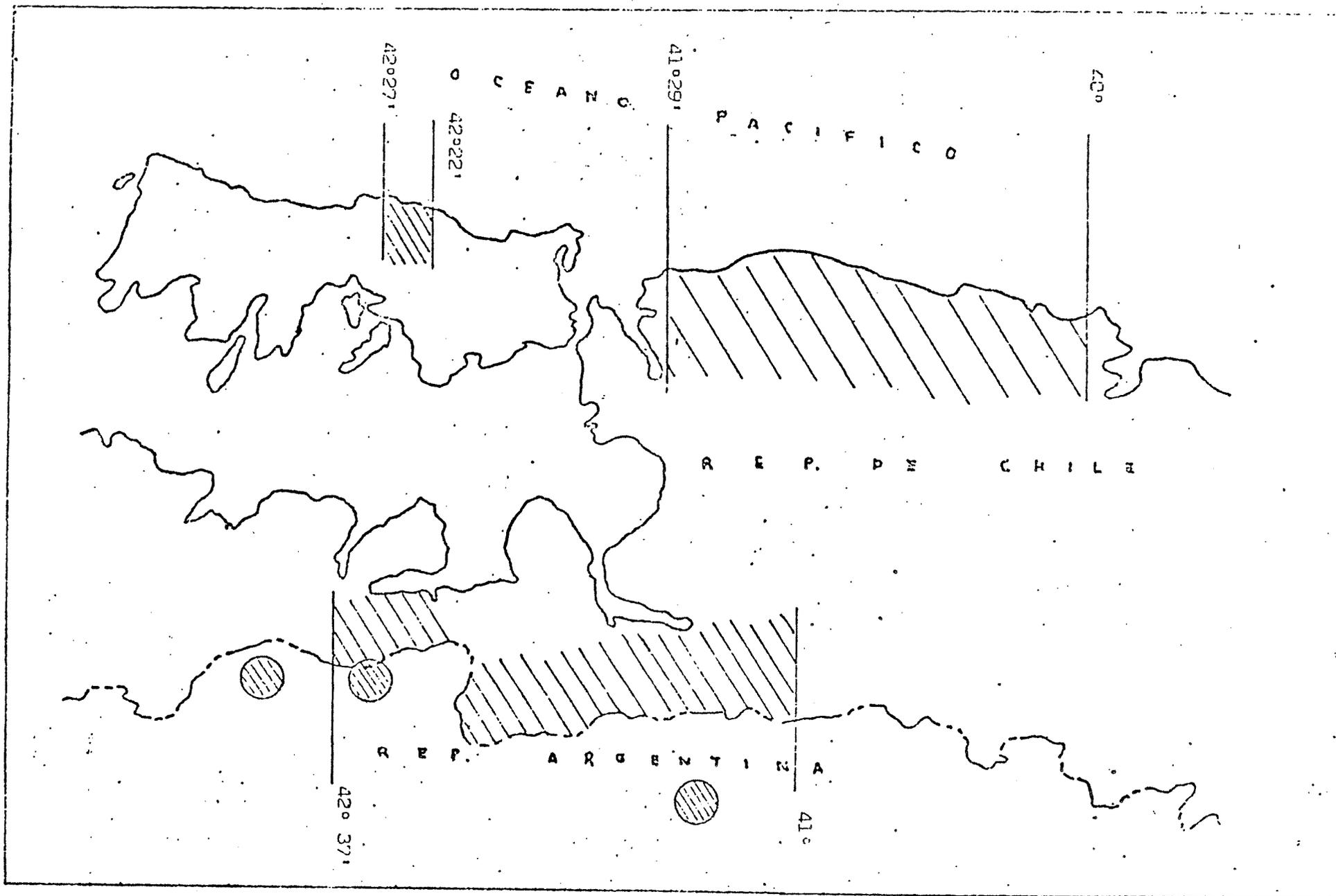
At the CITES meeting in 1985, Chile sought to have the Andean population transferred to Appendix II but this proposal was not accepted, having been opposed by Senator Malthus Escorihuela and the staff of the Fauna Department of Argentina. The proposal was withdrawn by the Chilean delegation following the comments made by the Argentinian delegation.

8. Conclusions

Bearing in mind the considerations stated above and considering that:

- The larch species is one of the forest species with the greatest longevity in the vegetable kingdom, a very low reproduction rate and extremely slow growth, all of which features make it a non-renewable natural resource.
- This species belongs to an ecosystem having unique characteristics whose function is still unknown but which is known to be very fragile.
- The species is capable of prospering despite severe limitations in respect of soil and physiography in which few tree species can develop, provided its environment is not altered.
- The Argentine populations cannot ensure the conservation of the species because they are small in size and are suffering a process of active natural regression.
- The Argentinian populations constitute ecosystems shared with Chile because they are situated in border areas.
- In Chile there is great pressure in favour of exploiting the coastal and Andean populations because of the possibility of selling the wood into the international trade, since the coastal populations are placed in Appendix II of CITES.
- There are no appreciable differences between the woods taken from the coastal and Andean populations; this, combined with the scant control over extraction and marketing existing in Chile, results in lumbering activities being carried out in both sectors (coastal range and Andes range), thereby directly affecting the Argentinian Andean populations.
- Argentina imports much wood from Chile and this makes it difficult to control the unlawful extraction of wood from Argentinian trees, since the woods coming from coastal and Andean ranges populations are similar, as already indicated.
- The survival of the species depends upon the conservation of the Chilean and Argentine populations as the only means of ensuring the conservation of the species, the ecotypes, the genetic resources and the ecosystems.

It is accordingly of the utmost urgency to transfer the coastal populations to Appendix I and to maintain the Andean populations in Appendix I.



9. References

- Boelcke, O., 1981. Plantas vasculares de la Argentina - Nativas y Exóticas. FECID.
- Boletín Oficial. 10. de octubre de 1982. Ley 22.344 del 10. de diciembre de 1980 (Aprobación de CITES, firmada en Washington el 3 de marzo de 1979 con sus Apéndices y enmiendas.)
- Cabrera A.L., 1973. Biogeografía de América Latina, Washington, D.C. VI. 117 p. OEA.
- Cabrera A.L., 1976. Registros Fitogeográficos Argentinas. Enciclopedia Argentina de Agricultura y Jardinería, 2e. Ed. II (I) Ed. ACME/
- CITES 1985. Resoluciones de la Conferencia de las Partes. Quinta Reunión de la Conferencia de las Partes Buenos Aires (Argentina) del 22 de abril al 3 de mayo de 1985.
- CONAF 1980. Antecedentes de Alerce Xa. Región.
- CONAF 1980. Informe de Ocurrencia y Daño Acumulado. Información al día 30.4.84. Sistema Estadístico PMF CONAF/OPIF. Sistema Estadístico PMF-CONAF'OPIF. Estadística de Caracter Oficial.
- Conseil de l'Europe. Liste de plantes rares, menacées et endemiques en Europe. Edition 1982. Strasbourt 1983.
- CORPO, 1982. Aprovechamiento integral de los Recursos Forestales Cordillera de Sarno.
- Covas, G., 1936. Las Coníferas indígenas de la República Argentina. Rev. Fac. Agronomía de La Plata 21: 201-223.
- Cozzo, D. 1979. Enciclopedia Argentina de Agricultura y Ganadería - 2o. Edic. T.II Arboles forestales, maderas y silvicultura de Argentina.
- Dallimore W.Z., A.B. Jackson, 1961. A handbook of coniferae. Lond.
- Dimitre, M. and H. Correa Luna, 1966/67. La Flora andino-patagónica. Estudio fitosociológico de una comunidad edáfica entre Puerto Blest y Laguna Frías del Parque Nacional Nahuel Huap An. P. Nac. II: 5-39.
- Dimitri, M.J., 1972. La región de los bosques andino-patagónicas. Sinopsis general. INTA/
- Donoso, A. Claudio, 1981. Investigación y desarrollo forestal: Tipos Forestales de los bosques Nativos de Chile.
- Elizalde, R., 1979. La Sobrevivencia en Chile. Ministerio de Agricultura, Servicio Agrícola y Ganadero. Santiago 492 pg.
- Erize, F., M. Canevari, P. Camevart, G. Costa, M. Rumboll, 1981. Los Parques Nacionales argentinos y otras de sus áreas naturales. INCAFO Madrid.

- Frangi, J.L., 1976. Descripción florística-estructural de un "stand" bosque de Nothofagus dombeyi en el Lago Gutierrez (Pcia. de Río Negro) Darwiniana 20:577-585.
- Gausson, H., 1968. Les Gymnospermes actuelles et Fossiles. Les Cupressacees. Trav. Lab. Forest. Toulouse 2 (13): 1-326.
- Hoffman, A., 1982. Flora Silvestre de Chile. Zona austral, Arboles, arbustos y enredaderas leñosas. Ed. Fundación C. Gay. Santiago.
- Hosseus, C.C., 1915. La Vegetación del Lago Nahuel Huapi y sus montañas. Trabajos del Mus. Farm. Med. BS.AS. nS3: 1-102.
- Hueck, K., 1978. Los Bosques de Sudamérica. Ecología, composición e importancia económica. Sociedad Alemana de Coop. Tecn. Eschborn R.F.A/
- Lauvenfels, D.J. de, 1965. The relationships of Fitzroya cupressoid (Mol.). Johnston and Diselme archeri J. D. Hooker based on morphological considerations. Phytomorphology 15: 414-419.
- Leonardis, Rosario F.J., (Dirección y textos) 1975. Libro del Arbol II. Especies Forestales Indígenas de la Argentina de Aplicación Industrial. Celulosa Argentina.
- Ku, Hu-Lin, 1953. A reclassification of Libocedrus and Cupressaceae. J. Arnold Arbor 34:17-36
- Muñoz, C., 1971. Chile: Plantas en Extinción Editorial Universitaria, Santiago 247 p.
- Odepa, 1986. Boletín Comercio Exterior 1983-84-85. Oficina de Planificación Agrícola. Chile.
- Perex Moreau, R.A., 1945. Reseña botánica sobre los Parques Nacionales Nahuel Huapi, Los Alerces y Lanín An. Mus. Pat 1.
- Perex Moreau, R.A. 1945. Descripción de algunas especies de la Flora de Nahuel Huapi y Lanín-Holmbergia 4-8:59-76.
- Perring, F.H. and S.M. Walters, 1971. Conserving rare plants in Britain Nature - 229 (5284):275-7.
- Seibert, P., 1982. Carta de Vegetación de la región del El Bolsón-Río Negro y su aplicación a la planificación del uso de la tierra, Documenta phytosociologica 2 - Fecic. Bs. As.
- Strassburger, E.F. Noll, II. Schenk and A.F.W. Schimper, 1974. Tratado de Botánica 7a. Ed. Española Ed. Marín.
- Tortorelli, L., 1956. Maderas y Bosques argentinos ACME.
- Universidad de Chile, Escuela de Ciencias Forestales. 1983. Catastro del Tipo Alerce.
- Urban O., 1934. Botánica de las plantas endémicas de Chile. Concepción, Chile.