#### Other Proposals

A. PRO POSAL

Transfer of Phragmipedium spp. from Appendix II to Appendix I.

B. PROPONENT

The Federal Republic of Germany.

#### C. SUPPORTING STATEMENT

1. Taxonomy

11.	Class:	Angiospermae

- 12. Order: Orchidales
- 13. Family: Orchidaceae

14.	Genus:	Phragmipedium spp.
		(Pfitz., 1894) Rolfe, 1896
		(see List of Species)

15.	Common	Names:	English: French:	slipper orchids sabots de Vénus
			Spanish:	
			German:	Frauenschuhorchideen

<sup>16.</sup> Code Numbers:

- 2. Biological Data
  - 21. <u>Distribution</u>: Tropical regions of Middle and South America. The distribution ranges from the South of Mexico into Guyana and along the Andean region into Bolivia. Two species occur in the East of Brazil (see Distribution Map).
  - 22. Population: Population data are scarce. The population is difficult to estimate, because of its relatively broad range and its occurence up to 2,000 m in altitude. P. caudatum was once common in parts of Peru where it is now virtually extinct. It has been collected very heavily for export. This species is now very difficult to find in commercial numbers (15-25) whereas before it was easy to collect 100-200 from a small locality covering 10-20 hectares. P. caudatum is endangered quite seriously despite its wide habitat adaptation (Bennett in litt., 1989).

In Peru P. ecuadorense is quite rare and P. caricinum is subject to imminent danger of depletion (Bennett in 11tt., 1988).

Phragmipedium besseae has remained undiscovered until 1981 and it would not seem likely that such a striking flower is widespread in the wild (Hegedus & Stermitz, 1986). According to environmental activists in Peru P. besseae is very near extinction in Peru due to excessive depredation in the past 6 years (Thompson Campbell <u>in litt.</u>, 1988; Sheeline <u>in litt.</u>, 1988).

One population of <u>P. exstaminodium</u>, which has been first described in 1984 (Castano <u>et al.</u>, 1984), is already extinct; the only other one known is threatened by collecting and the destruction of its habitat by slash and burn cultivators (IUCN, 1988). A new species recently discovered in southern Mexico will soon be published and is also very rare, known only from a few specimens and one or two localities (Hágsater <u>in litt.</u>, 1988).

23. <u>Habitat</u>: The phragmipediums vary in their habitat from being truly epiphytic to lithophytic on mossy rocks, or predominantly terrestrial, usually on grassy banks (Hawkes, 1965). Most of the species occur in mountainous regions between 300-2,000 m above sea level.

The destruction of tropical forests means a serious threat to the whole genus Phragmipedium.

For example, habitat destruction coupled with massive, highly selective depredation has reduced the normal population of  $\underline{P}$ . caudatum in Peru and has greatly endangered this species (Bennett in litt., 1989).

- 3. Trade Data
  - 31. <u>National Utilization</u>: Slipper orchids are sometimes used in preparation of folk remedies. They are at all palatable, but the slow growth rate limits culinary usage (Atwood, 1984).
  - 32. Legal International Trade: The trade in species of <u>Phragmipedium</u> has undoubtedly increased dramatically in the past few years. Dr. Cribb (Royal Botanic Gardens Kew) has seen large importations of jungle-collected plants in California and Europe (Cribb <u>in</u> litt., 1988).

There is a great international interest in these species among hobbyists and horticulturists. For instance they were offered in the USA in 1986-1988 for US\$ 4-40 each as imported plants from Brazil and Peru. In the Federal Republic of Germany you can get them now (1988) for DM 30-100 each.

Phragmipedium besseae, in which cultivation and artificial propagation remains problematical at this time (Hegedus & Stermitz, 1986; Bergstrom, 1988), is offered for USS 125-500 in the USA and for DM 300 in F.R. Germany in 1988 (see Annex 3).

The 1984 discovered <u>Phragmipedium exstaminodium</u> had already been offered one year later in the F.R. Germany for DM 40-60 (see Annex 3).

About 100 plants of P. exstaminodium were once introduced as P. cadatum into the United States, about 15 years ago. Dr. Hágsater saw also large amounts of P. besseae which were sold in Ecuador. (Hágsater in litt., 1988). In 1985 no less than 60,000 plants of <u>P</u>. <u>pearcei</u> were systematically collected and exported in only a few shipments by one Peruvian exporter (Bennett <u>in litt</u>., 1989).

# Imports

and and also also also also also		
Australia	1984: 1985: 1986:	18 Brazil (a) 3 Brazil (a) 110 Peru (a), 56 Brazil (a), 9 USA (a)
Bermuda	1985: 1986:	7 Ecuador (a) 20 Peru (a)
Federal Republic of Germany	1984: 1985: 1986: 1988:	54 Guatemala, 40 Brazil 70 Peru 265 Peru (a), 115 Peru, 43 Brazil (a) 1240 Peru, 61 Brazil (until October 1988)
Japan	1983: 1985: 1986:	
Netherlands	1984: 1985: 1986:	l6 Brazil (a), l0 Guatemala 10 Peru (a), 5 Brazil (a) 10 Peru (a), 5 Brazil (a)
Switzerland	1984:	1 F.R. Germany (a)
United Kingdom	1977: 1978: 1979: 1981: 1982: 1984: 1986:	10 Guatemala. 2 USA (a)
United States		
of America	1977: 1978: 1979:	9 kg live Ecuador, 2 shipments live Ecuador 1 Brazil 565 Ecuador, 108 Peru, 6 Brazil, 4 Costa Rica, 2 Panama, 1 Guyana,
	1980:	l Venezuela 500 Guyana, 309 Ecuador, 80 Peru, 22 Panama, 3 Brazil
	1981:	335 Peru, 30 Peru (a), 14 Panama, 6 Brazil (a), 10 pieces Brazil
	1982:	360 Guatemala (a), 220 Colombia, 150 Ecuador, 100 pieces Brazil, 56 Panama, 8 Panama (a), 21 Peru (a), 1 Denmark (a), 1 United Kingdom (a)
	1983:	425 Colombia (a), 1 onited Kingdom (a) 425 Colombia (a), 382 Peru (a), 29 Peru, 109 Brazil, 68 Panama, 16 Panama (a), 29 Guatemala, 5 Ecuador, 1 Dominica

	1984:	574 Guatemala, 233 Colombia (a), 131 Costa Rica, 105 Panama, 68 Brazil, 34 Peru, 11 Ecuador, 6 United Kingdom, 5 France (a), 1 Japan (a)
	1985:	
	1986:	
	1987:	only from Peru 2167 obtained from the wild (Thompson Campbell <u>in litt</u> ., 1988)
Exports		
Australia	1986:	5 USA (a), 2 New Caledonia (a)
Colombia	1986 <b>:</b>	876 USA (a), 180 Japan (a), 6 Panama (a), 5 Canada (a), 5 F.R. Germany (a)
Costa Rica	1984:	6 USA, 4 F.R. Germany
Denmark	1982:	l USA (a)
Ecuador	1984: 1985:	2 USA 74 USA, 36 USA (dried plants), 22 Canada, 6 Caribbean
	1986:	
Federal Republic of Germany	1986:	21 USA (a), 3 Switzerland (a), 2 Austria (a), 1 Canada (a), 1 Japan (Brazil) (a)
Guatemala	1982:	360 USA (a), 250 F.R. Germany (a), 50 Belgium (a), 50 japan (a), 25 United Kingdom (a), 20 Denmark (a), 18 Netherlands (a)
	1983 <b>:</b>	76 F.R. Germany, 53 USA, 20 United
	1984:	Kingdom 873 USA, 226 F.R. Germany, 30 Japan, 30 United Kingdom, 25 Denmark, 20 Australia, 10 Netherlands, 2 Italy
	1985:	875 USA, 226 F.R Germany, 30 United Kingdom, 30 Japan, 25 Denmark, 20 Australia, 10 Netherlands, 2 Italy
Netherlands	1984:	l France (a), l Switzerland (a)
Panama	1980: 1981:	l Canada 3 USA
United Kingdom	1976: 1977:	l Netherlands 10 New Zealand, l F.R. Germany, 1 Netherlands
	1978: 1984:	l Canada 6 USA (a)
		82

--

.

	United States		
	of America	1979:	l Australia, l Italy, l United Kingdom
		1980:	27 Japan, 23 Italy, 14 Canada, 5 Philippines, 3 South Africa
		1981:	25 Japan (a), 18 Canada (a), 5 Austria
			(a), 4 Australia (a), 3 pieces Australia, 3 Costa Rica (a), 2 Italy
			(a), 1 F.R. Germany (a), 3 pieces
			Mexico, 3 pieces United Kingdom
		1982:	50 Japan (a), 15 Canada (a), 7 United Kingdom (a), 6 New Zealand (a), 4 F.R. Germany (a), 3 Hong Kong (a)
		1983	43 Japan (a), 20 Australia (a), 4 South
			Africa (a), 2 Canada (a), 1 New Zealand
		1984:	(a), 12 Country unknown (a) 30 Japan (a), 16 Canada (a), 1 Brazil
		1904.	(a), 1 New Zealand (a)
		1985:	ll Canada (a), l Australia (a),
		1986:	l Bermuda (a) 44 Kenya (a), 25 Switzerland (a),
			22 Canada (a), 12 Australia (a),
			9 United Kingdom (a), 7 New Zealand
			(a), 3 Belgium (a), 2 Japan (a), 1 Hong Kong (a), 3 country unknown (a)
	Venezuela	1985:	30 Australia (a)
	(Ref.: WIMU Trade	Data)	
	(a) = artificiall	y propag	ated
	(Peru) = country	of origi	n
	Imports of Phragm	ipedium	besseae:
	Federal Republic		
	of Germany		50 Peru (a) 300 Peru
		1900:	SUO PELO
	United States		
	of America		20 Peru
		1987:	20 Peru
	(Ref.: WTMU Trade pers. com., 1988)		hompson Campbell <u>in</u> <u>litt</u> ., 1988; Jelden
33.	large-flowered sp	ecies. om Chile	nown, but likely to exist in this Many plants are sent from Ecuador , Colombia and Mexico) to Peru and from
	and L orchids) re	ceived a	ted from Peru. A company in the USA (J shipment in December 1988 from an identified as <u>P. boisserianum</u> (Wiesman

According to Bennet (in litt., 1989) all exports of <u>Phragmipedium</u> from Peru are essentially illegal because "there is no Scientific Authority being consulted by the Management Authority for the

<u>in litt.</u>, 1988).

identification of the species to be exported, and to advise whether the number of orchids to be exported might endanger the normal population in the area from which they were collected. The Peruvian requirements to obtain an export permit are that "the exporter must have the orchids identified by any biologist" and that he has payed "to the Ministry of Agriculture for the extraction of the orchids from the forest".

It may be also possible that many plants declared as artificially propagated from the countries of origin may be obtained from the wild. This often means that the plants had been grown under nursery conditions for a short time prior to their export.

#### 34. Potential Trade Threats:

341. Live Specimens: The trade in Phragmipedium species has largely increased in the last years. There is a great demand for wild-collected plants (see Annex 3), because it is easier and cheeper to get them from the wild than to rise them from seeds or tissue-cultures. Propagating from seeds or tissue-cultures takes 2-4 years until the plant flowers, it is then ready for export. Although great efforts are being made, artificial propagation in the genus Phragmipedium is difficult and only well established in some species and horticultural hybrids.

The Asociación Mexicana de Orquideología A.C. has an ongoing conservation project for <u>P</u>. <u>exstaminodium</u> to try and locate viable populations, to see the possibility of their conservation and to promote its artificial propagation (Hágsater in litt., 1988).

In P. besseae hybrids are not known at present, but are awaited soon in account of the bright colour of her flowers (Senghas & Bockemühl, 1988). In the F.R. Germany an orchid dealer has succeded in artificial propagation of P. besseae from seed (Senghas pers. com., 1988). According to Hágsater (<u>in litt.</u>, 1988) Father Angel Andreetta in Cuenca cultivates and propagates this species easily with new growth produced from old stolons and its propagation by vegetative division in the Andean countries seems a very worthwhile commercial project for export.

Moreover the phragmipediums are difficult to keep in cultivation and not plants for beginners (Mergner, 1985). As a result there is always a ready market for wild-collected plant. Both species, P. besseae from N. Peru and Ecuador and P. extaminodium from Mexico are particularly threatened by trade. According to Dr. Cribb (Royal Botanic Gardens Kew) every known colony of P. besseae has been stripped by collectors (Cribb in litt., 1988).

The principal exporter of Peruvian orchids, Mr. Manuel Arias S., has hired the Ecuadorian who discovered the habitat in Ecuador of P. besseae to come to Peru to assist him in finding new localities so as to continue his very profitable exportations of P. besseae (Bennett in litt., 1989). In the opinion of Dr. Hagsater P. besseae is a common species usually found in very safe natural habitat although some localities have been completely depleted of their plants (Hagsater in litt., 1988).

The native population in Peru has been made aware that the plants are valuable and will be purchased by commercial collectors. In one locality in the Cordillera Azul in Peru, that has at least 750 plants of <u>P. boissierianum</u> in an area of 1.5 hectares, the entire population has been stripped and exported by one man (Bennett in litt., 1989).

A lot of orchid collecting expeditions into the countries of origin (see Annex 3), offered by travel agencies, will also mean a great threat.

- 342. Parts and Derivatives: Traded almost exclusively as whole plants. In 1985 there was one account of 36 dried plants from Ecuador to USA. There may be some collecting of seeds, cuttings and flowers by tourists and orchid collecting expeditions.
- 4. Protection Status
  - 41. National:

Ecuador: Commercial export prohibited (Ley Forestal y de Conservación de Areas Naturales y Vida Silvestre No. 74, 1981).

Guyana: Commercial export prohibited from 28.02.1978 (WTMU-Traffic Bulletin, Vol. 8(4), 1987).

Mexico: Commercial export prohibited except artificially propagated orchids (Bases de Control y Regulación de Exportaciones e Importaciones de Fauna Silvestre y Sus Productos Derivados, 1982).

Nicaragua: Commercial export prohibited (Decreto No. 625, 1977).

Other countries: Unknown.

- 42. <u>International</u>: The wole genus <u>Phragmipedium</u> is included in Appendix II of CITES.
- 43. Additional Protection Needs: The wonderful flowers of these plants, resembling those of Paphiopedilum spp., cause a great demand by orchids collectors and hobbyists. Since the trade in Paphiopedilum spp. has been more and more controlled many orchid dealers tend to import and sell phragmipediums. This high collecting-pressure on populations, in combination with alteration of their habitats, has caused that some species, especially the rare Phragmipedium bessae, became endangered. According to Cribb (pers. comm. to Schneckenburger, 1988) and some environmental activists in Peru (Thompson Campbell in litt., 1988; Sheeline in litt., 1988) it is already threatened with extinction.

The transfer of the genus <u>Phragmipedium</u> to Appendix I will encourage the artificial propagation of these species and, therefore, help to reduce demand for wild-collected specimens. It is rarely possible, even for an orchid specialist, to identify individual orchid plants when they are not in flower (Stewart, 1986). Especially in the genus <u>Phragmipedium</u> not flowering species are very difficult to distinguish (Senghas pers. comm., 1988). Commercial collectors in Peru export the great majority of their jungle collected specimens without flowers (Sheeline in <u>litt.</u>, 1988). So for look-alike reasons it is not practical to put only a few species in Appendix I.

### 5. Information on Similar Species

There is a great similarity to the whole genus <u>Paphiopedilum</u>. Hybrids between these genera are known to exist (Wimber & Hanes, 1985). The genera <u>Cypripedium</u>, <u>Selenipedium</u> and <u>Phragmipedium</u> also resemble one another.

The species of <u>Phragmipedium</u> are often listed under the genera Paphiopedilum and Cypripedium (for synonymy see List of Species).

#### 6. Comments from Countries of Origin

Belize: Support the proposal (Rosado in litt., 1988).

<u>Mexico</u>: Objects to the proposal, because in their opinion there isn't any trade in these species and because there are several studies on artificial propagation (De la Garza Garcia in litt., 1988).

7. Additional Remarks

Mr. David E. Bennett, Jr., the Co-ordinator of the Orchid Group ECCO (IUCN) in Peru, has proposed to put P. besseae in Appendix I of CITES to the CITES Management Authority of Peru in 1987, because this species is now virtually extinct in Peru. He now "feels very strongly that the whole genus <u>Phragmipedium</u> needs very prompt additional protection in Appendix I of CITES (Bennett in litt., 1989).

8. References

Atwood, J.T.J., 1984. The Relationships of the Slipper Orchids (Subfamily Cypripedioideae, Orchidaceae). Selbyana 7: 129-247.

Bennett, D.E. Jr. [Coordinator Orchid Group ECCO (IUCN), Peru] in litt. to L. Klös, 20 January 1989.

Bergstrom, B., 1988. The Great Phragmipedium besseae Caper. Orchid. Dig., Jan.-Feb.-Mar.: 22-26.

Brieger, F.G., 1971. Unterfamilie <u>Cypripedioideae</u>. Pp. 161-198. In: Schlechter, R.: Die Orchideen. 3. Lief., Bogen 9-12. Parey, Berlin & Hamburg.

Castano, G., Hágsater, E. & Aguirre E., 1984. <u>Phragmipedium</u> <u>exstaminodium</u>: A new species from Chiapas, <u>Mexico</u>. Orchídea (Méx.), 9(2): 198-202.

Cribb, P.J., 1986. The World Wild Orchid Crisis. Kew Magazine, Vol 3(1): 4-8.

Cribb, P.J., (Royal Botanic Gardens Kew) in litt. to L. Klös, 28 November 1988. Cribb, P.J., 1988. Personnal communication to S. Schneckenburger (Bundesamt für Ernährung und Forstwirtschaft, Frankfurt).

- De la Garza Garcia, G. (CITES Management Authority, Mexico) <u>in litt</u>. to Mr. Ulrich (CITES Management Authority, F. R. Germany), 14 December 1988.
- Dodson, C.H. & Dodson P.M., 1980. <u>Phragmipedium longifolium</u> (Rchb. f. & Warsc.) Rolfe. Plate 202. In: Dodson, C.H.: Icones Plantarum Tropicarum. Marie Selby Botanical Gardens, Sarasota.
- Dodson, C.H. & Dodson P.M., 1982. <u>Phragmipedium wallissi</u> (Rchb. f.) Garay. Plate 482. In: Dodson, C.H.: Icones Plantarum Tropicarum. Marie Selby Botanical Gardens, Sarasota.
- Dodson, C.H. & Dodson P.M., 1984. <u>Phragmipedium reticulatum</u> (Rchb. f.) Garay. Plate 978. In: Dodson, C.H.: Icones Plantarum Tropicarum. Marie Selby Botanical Gardens, Sarasota.
- Fast, G., 1980. Orchideenkultur. Eugen Ulmer, Stuttgart.
- Garay, L.A., 1979. The Genus <u>Phragmipedium</u>. Orch. Dig., 43(4):133-148.
- Hágsater, E. (Asociación Mexicana de Orquideología A.C., México) <u>in</u> litt. to L. Klös, 22 December 1988.
- Hamer, F., 1985. <u>Phragmipedium warscewiczianum</u> (Rchb. f.) Garay. Plate 1248. In: Dodson, C.H.: Icones Plantarum Tropicarum. Marie Selby Botanical Gardens, Sarasota.
- Hawkes, A.D., 1965. Encyclopaedia of Cultivated Orchids. Faber & Faber Lmtd, London.
- Hagedus, L.S. & Stermitz, F.R., 1986. Further Facts on Phragmipedium besseae. American Orchid Society Bulletin, Vol. 55(4): 367-369.
- IUCN, 1988. Chiapas Slipper Orchid <u>Phragmipedium</u> exstaminodium. Species No.: 24.
- Jelden, D. (Bundesamt für Ernährung und Forstwirtschaft, Frankfurt), 1988. Personnal communication to L. Klös.
- Mergner, H., 1985. Die Orchideenpflege im Zimmer (Orchideenliebhaberei). In: Schlechter, R.: Orchideen. Ed. 2. Orchideen im Erwerbsgartenbau, Orchideenpflege im Zimmer, Freilandorchideen, Krankheiten, Naturschutz. Parey, Berlin & Hamburg.
- Rosado, O. (Ministry of Agriculture, Forestry and Fisheries, Belize) in litt. to L. Klös, 17 October 1988.
- Schoser, G., 1983. Phragmipedium die Frauenschuhorchideen Mittelund Südamerikas. Der Palmengarten 47(1): 9-17.
- Schreier, K., 1988. Sind die Tage des Ueberlebens der meisten epiphytischen Wildorchideen gezählt? Die Orchidee, 39(1): 34-38.
- Senghas, K. (Botanical Garden, Heidelberg) 1988. Personnal communication to L. Klös.

Senghas, K. & Bockemühl L., 1988. <u>Phragmipedium besseae</u> Dodson & Kuhn 1981. Beilage zu Die Orchidee, 39(5).

Sheeline, L. (TRAFFIC USA) in litt. to L. Klös, 9 November 1988.

- Stewart, J., 1986. Orchids. Species, Newsletter of the SSC, August 1986: 27.
- Stewart, J., 1987. Orchid Conservation: Survival and Maintenance of Genetic Diversity of All Orchids Throughout the World. American Orchid Society Bulletin, Vol. 56(8): 822-827.
- Thompson Campbell, F. (Natural Resources Defense Council, New York) <u>in litt</u>. to R. Blanke (Bundesamt für Ernährung und Forstwirtschaft, Frankfurt), 13 October 1988.
- Wiesman, M. (Pet Hospital, USA) <u>in litt</u>. to Dave Bennett (Asociación de Ecología y Conservación, Perú), 28 December 1988.
- Wimber, D. & Hanes, J., 1985. Phragmipaphiums Are They Possible? American Orchid Society Bulletin, Vol. 54(1): 61-65.

Doc. 0993c

Phnex 1: List of Species

# <u>Phragmipedium:</u>

(Genussynonymy: Phragmopedilum, Cypripedium, Paphiopedilum and Selenipedium spp.)

Name:	Synonymy:	
P. besseae Dodson & Kuhn		
P. boissierianum (Reichb. f.) Rolfe	(include	P. czerwiakowianum (Reichb. f.) Rolfe, P. reticulatum (Reichb. f.) Rolfe, P. boisseranum)
P. caricinum (Lindl. & Paxt.) Rolfe		
P. caudatum (Lindl.) Rolfe		(Cypripedium humboldtii
P. ecuadorense Garay		(P. ecuadoriense)
P. exstaminodium Castano et al.		(P. caudatum. P. warscewiczianum)
P. kaieteurum (N.E.Br.) Garay		(P. lindleyanum var. kaieteurum)
P. klotzschianum (Reichb. f.) Rolfe		(P. klotzscheanum)
P. lindleyanum (Schomb. ex. Lindl.) Rolfe		
P. lindenii (Lindl.) Dressler & Williams		(P.lindeni, Uropedium lindenii)
P. longifolium (Reichb. f. & Warsz.) Rolfe	•	<ul> <li>P. dariense (Reichb. f.) Garay</li> <li>P. gracile Hort.,</li> <li>P. hartwegii (Reichb. f.) Pfitz,</li> <li>P. hincksianum (Reichb. f.) Garay,</li> <li>P. roezlii (Reichb. f.) Garay)</li> </ul>
P. pearcei (Reichb. f.) Rauh & Senghas	5	
P. sargentianum		

P. sargentianum (Rolfe) Rolfe Annex 1 - page 2 -

- P. schlimii
   (lindl. & Reichb. f.) Rolfe
- P. vittatum (Vell.) Rolfe
- P. wallisii (Reichb. f.) Garay
- P. warscewiczianum (Reichb. f.) Garay

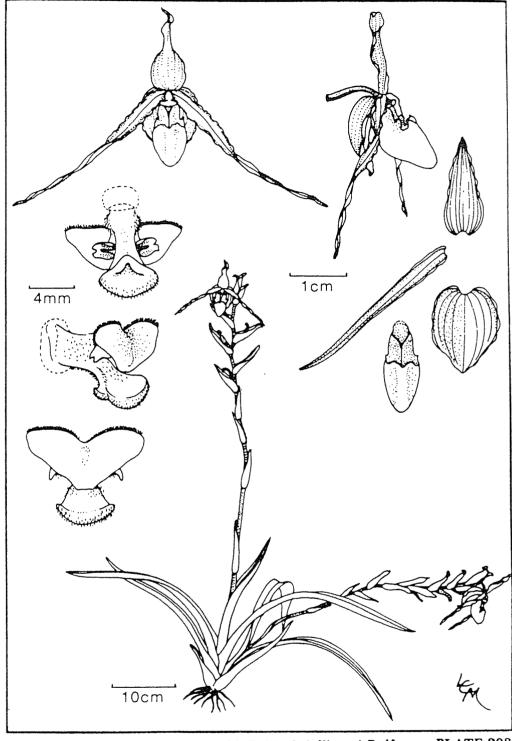
.

# Annex 1 - page 3 -

# Distribution of Phragmipedium-species

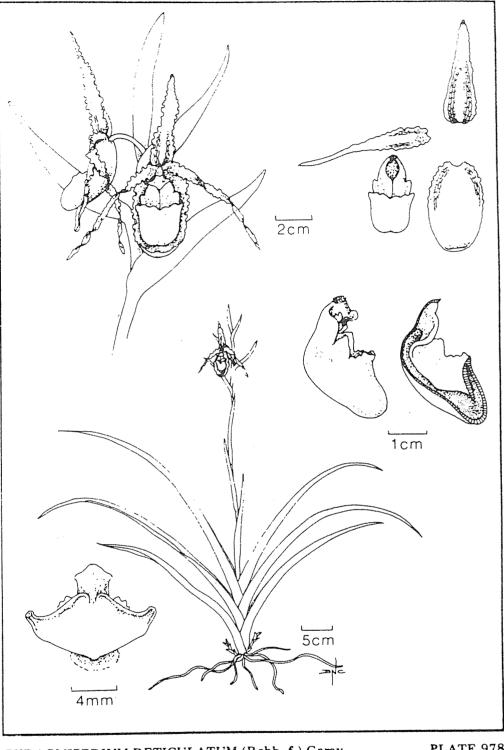
P. besseae	Ecuador, Peru
P. boissierianum	Ecuador, Peru
P. caricinum	Bolivia, Peru
P. caudatum	Colombia, Ecuador, Panama, Peru, Venezuela
P. ecuadorense	Ecuador, Peru
P. exstaminodium	Mexico
P. kaieteurum	Guyana, Venezuela
P. klotzschianum	Guyana, Venezuela
P. lindleyanum	Guyana, Venezuela
P. lindenii	Colombia, Ecuador, Venezuela
P. longifolium	Colombia, Costa Rica, Ecuador, Panama, Peru
P. pearcei	Ecuador, Peru
P. sargentianum	Brazil
P. schlimii	Colombia
P. vitţatum	Brazil
P. wallisii	Ecuador
P. warscewiczianum	Colombia, Middle America

,



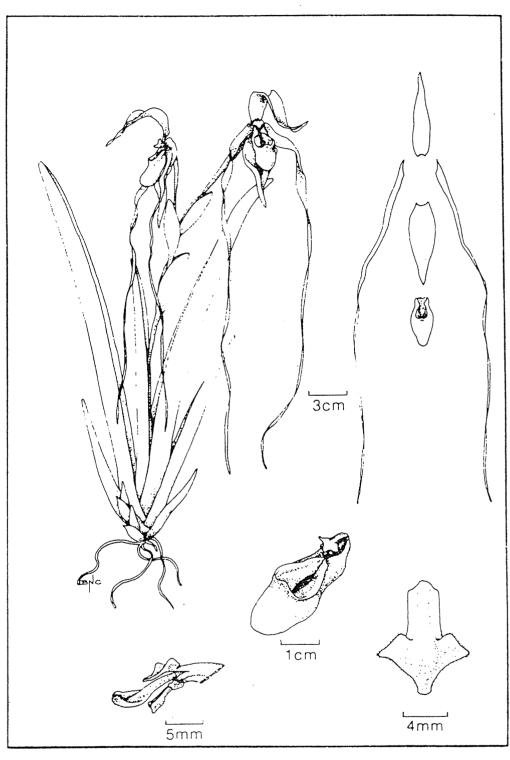
PHRAGMIPEDIUM LONGIFOLIUM (Rchb. f. & Warsc.) Rolfe PLATE 202 Icones Plantarum Tropicarum

(Dodson, C.H. & P.M. Dodson, 1980)



PHRAGMIPEDIUM RETICULATUM (Rchb. f.) Garay Icones Plantarum Tropicarum

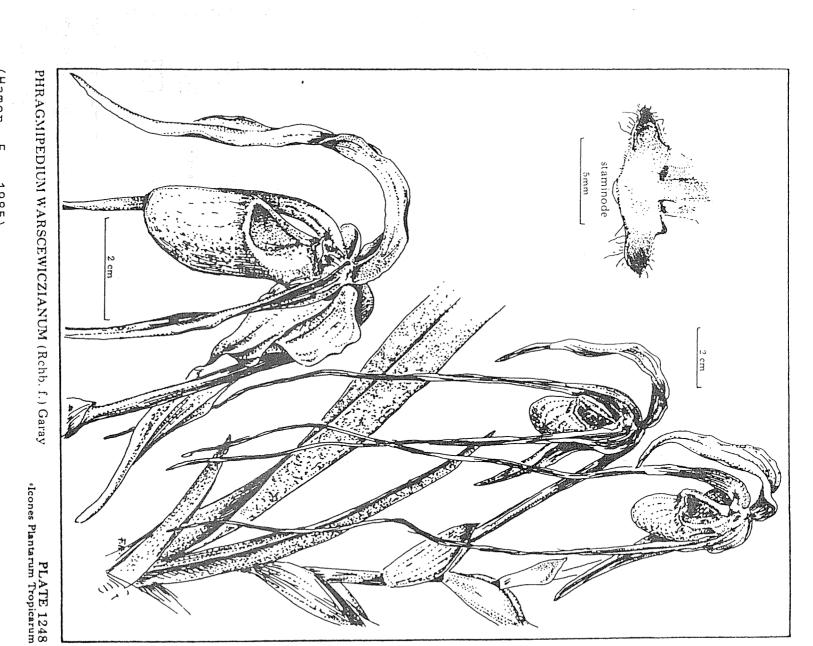
(Dodson, C.H. & P.M. Dodson, 1984)



PHRAGMIPEDIUM WALLISII (Rchb. f.) Garay

PLATE 482 Icones Plantarum Tropicarum

(Dodson, C.H. & P.M. Dodson, 1982)



(Hamer, т ; 1985)

Annex

4

۲

دم

1 page  $\overline{\phantom{a}}$ 

1

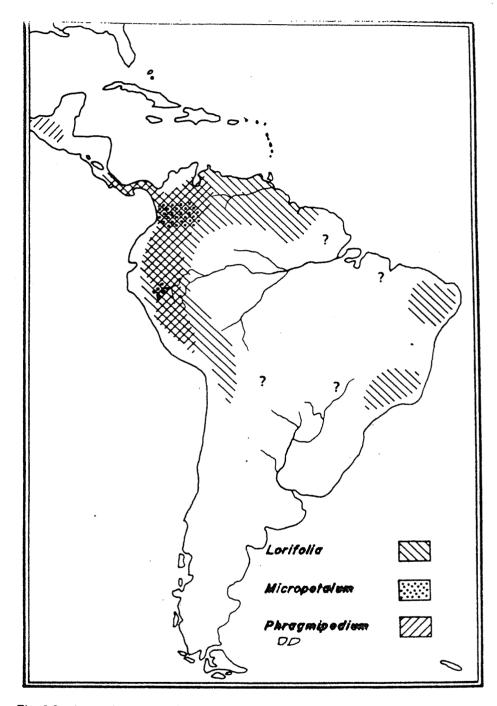
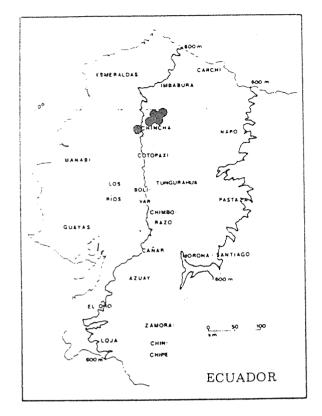


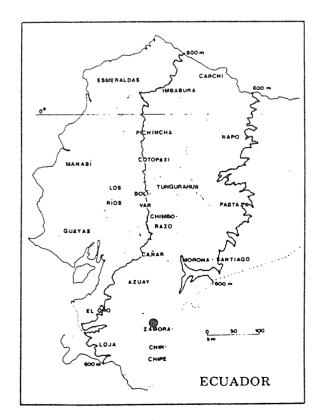
Fig. 6.3. Approximate range limits of the three *Phragmipedium* sections. Question marks indicate areas where species may occur or have occurred. There is little reason to believe that populations between the non-related east Brazilian species were ever continuous since each is closely related to species to the immediate west or northwest. Although *Phragmipedium* may have had more suitable habitats in the lower latitudes than *Selenipedium*, the presumed greater seed dispersibility probably accounts for its relatively broad range.

(Ref.: Atwood, 1984)



Phragmipedium longifolium (Rchb. f. & Warse.) Rolfe

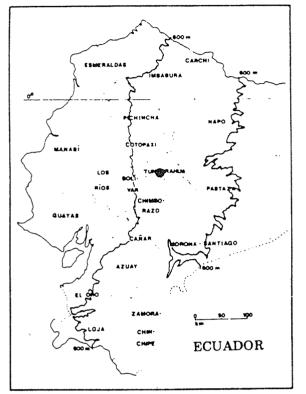
Authors: C. H. and P. M. Dodson Illustrator: Lisa Megahee Editor: C. H. Dodson The Marie Selby Botanical Gardens, P. O. Box 4155, Sarasota, FL 33578 Icones Plantarum Tropicarum 1980, Plate 202



Phragmipedium reticulatum (Rchb. f.) Garay

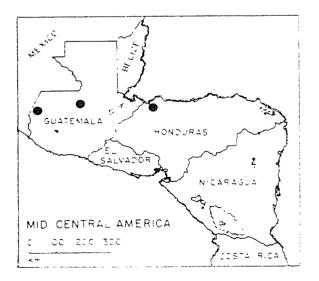
 Authors: C. H. and P. M. Dodson
 Illustrator: Barbara N. Culbertson
 Editor: C. H. Dodson

 The Marie Selby Botanical Gardens, 811 S. Palm Ave., Sarasota, FL 33577
 Icones Plantarum Tropicarum 1984, Plate 978



Phragmipedium wallisii (Rchb. f.) Garay

Authors: C. H. and P. M. Dodson Illustrator: Barbara N. Culbertson Editor: C. H. D. dson The Marie Selby Botanical Gardens, P.O. Box 4155, Sarasota, FL 33578 Icones Plantarum Tropicarum 1982, Plate 482



Phragmipedium warscewiczianum (Rchb. f.) Garay

Author: Fritz Hamer Editor: C. H. Dodson The Marie Selby Botanical Gardens, 811 S. Palm Ave., Sarasota, FL 33577 Icones Plantarum Tropicarum 1985, Plate 1248

•

-

9.-

WE SAY IT AGAIN!
Grow the wonderful, colorful, and always pleasing
PAPHIOPEDILUM!
Why? The season is now until May!
<ol> <li>The plants require less heat.</li> <li>They require less room. (We grow them pot to pot).</li> <li>They are easier to grow, need less attention, and usually flower in 3" to 4" pots.</li> <li>The flowers last longer — up to three months on the plant.</li> <li>The flowers are also smog-resistant.</li> <li>Low in price. Not cheap, but very inexpensive.</li> <li>Great assortment.</li> </ol>
Get the good stuff:
We offer a special assortment of:
Large dorsal sepals, spotted: Hybrids of: Pacific Ocean, Langley Pride, Chan's Temple, Elegy
Reds: Hybrids of: Winston Churchill (these get awards) and Fire Girl
Yellow and Greens: Hybrids of: Kay Rinaman, Stoke Poges, Green Ruffles
Pink Potential: Hybrids of: charlesv orthii
Brushed dorsal sepals: Hybrids of: Sandra Mary, Fire Girl, some Winston Churchill, Harbor
Shipped:
Lots of 10 plants in-pot, assorted colors in bud, lovely foliage 12" to 20" span. 10 plants (4" pot size) in bud priced at
Lots of 20 plants, shipped bare-root, all in bud, lovely plants, 12" to 20" span. 20 plants, good assortment, all in bud priced at\$175.00 Plus packing and UPS second-day air charge \$ 7.50 Total \$182.50
Lots of 100 plants, shipped bare-root, all in bud, multigrowths, fine assortment. 100 plants, in bud or in flower priced at\$750.00 Plus packing and UPS second-day air charge\$17.50 Total\$767.50
Our NEW PAPHIOPEDILUM SPECIES LIST now has on it: BARBIGERUM\$20.00 each HAINANENSE\$25.00 each
PHRAGMIPEDIUM BESSEAE
FOR YOUR CONVENIENCE: Use our out-of-state toil-free number - 1-800-235-4139. TERMS: Net cash with order California residents, please add 6% sales tax, We also accept Visa and MasterCard. For orders outside the continental U.S.A., please add \$20.00 for required export documents.
Jhe Orchid House
1699 SAGE AVENUE, LOS OSOS, CALIFORNIA 93402 (805) 528-1417 or 1-800-235-4139

American Orchid Society Bulletin, Vol. 57(1), 1988

•

-

Orchic	leen-Kultu	iren
lisabeth Baumann 200 Oberhausen 1	1 · Beethovenstraße 202 · Tel. 02	08/607553
	Constance	50 DM
		50 DM
		60,- DM
		40 DM
		50,- DM
		60 DN
		45 DN
		45,- DM
35 DM		50 DM
hr) 30 - DM		50 DM
		55,- DN
		60,- DN 60,- DN
		45 DN
		45 DN 45 DN
		50,- DN
		45 DN
		50, - DN
		60 DN
		50 DN
		60,- DN
		45 Dł
		50,- DI
	Stone Ground	45,- DI
	St. Swithin	50,- DI
90,- DM	Transvaal	75,- DI
	Vacuna	45,- DI
	Vanda M, Pearman	50,- DI
	Vanguard	60.– DI
	Woluwense	50,- DI
	Alle vorgenannten Paphiopedilum h	aben eine Blat
	spanne zwischen 15 und 40 cm.	
	Fillagaupeoloni (olonstark)	
	besseae	300,- DM
	boiocoriaoum	55,- D
		60,- D
		70,- D
		70,- D
		40,- D
40 - DM		75 D
		40,- D
		30 – D
		100,- D
55 DM	wallisii	70,- D
	30 DM           35 DM           35 DM           35 DM           35 DM           30 DM           35 DM           30 DM           35 DM           30 DM           35 DM           30 DM           35 DM           40 DM           35 DM           40 DM           35 DM           40 DM           30 DM           70 DM           30 DM           50 DM           60 DM           51 DM <th< td=""><td>200 Oberhausen 11 · Beethovenstraße 202 · Tel. 02         Constance         30 DM       Delophyllum         35 DM       Deperle         30 DM       Elie de Rothschild         40 DM       Elie de Rothschild         40 DM       Helvetia         40 DM       Houghtoniae         35 DM       Havetia         40 DM       Houghtoniae         35 DM       Havetia         40 DM       Mogens         10 DM       Martine Oaksmith         70 DM       Neerach         80 DM       Paris         60 DM       Paris         60 DM       Stone Ground         90 DM       Stone Ground         90 DM       Vacuna         Vacuna       Vacuna         20 DM       Varcuna         Vacuna       Vacuna         21 DM       Vacuna         22 DM       Varcuna M. Pearman</td></th<>	200 Oberhausen 11 · Beethovenstraße 202 · Tel. 02         Constance         30 DM       Delophyllum         35 DM       Deperle         30 DM       Elie de Rothschild         40 DM       Elie de Rothschild         40 DM       Helvetia         40 DM       Houghtoniae         35 DM       Havetia         40 DM       Houghtoniae         35 DM       Havetia         40 DM       Mogens         10 DM       Martine Oaksmith         70 DM       Neerach         80 DM       Paris         60 DM       Paris         60 DM       Stone Ground         90 DM       Stone Ground         90 DM       Vacuna         Vacuna       Vacuna         20 DM       Varcuna         Vacuna       Vacuna         21 DM       Vacuna         22 DM       Varcuna M. Pearman

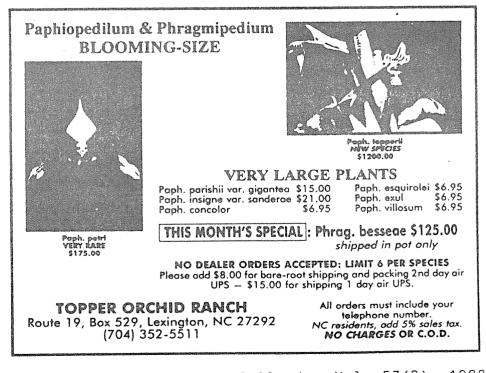
Besuche nur nach telefonischer Terminabsprache. Kein Mindestauftrag. Versand per Rechnung. Verpackung und Porto wie verauslagt. Keine Preisliste. Preise incl. MWSt. Versand nur bei frostfreiem Wetter.

.

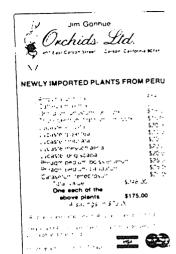
Die Orchidee, 39(1), 1988

# ZUM RARE BIRDS FLU INTO MY CUCKOO'S NEST . . ALL . . . RARE . . . PAPHIOPEDILUM AND PHRAGMIPEDIUM SPECIES . . PLUZ ... TWO REALLY RARE PHRAGO, BIRDS. FUZ TWO REALLY RARE PHRAGO. BIRDS. PHRAGMIPEDIUM\_VITIATUM\_OORSAL SEPAL QUITE TALL, WITH LONGISH PETALS AND A SUGHTLY DISTENDED POUCH. \$40.00 COLORS GREEN ON TANNISH BACKGROUND. \$40.00 PHRAGMIPEDIUM\_BESSEAE, THIS IS THE RARE REDDISH FORM FROM ECUADOR. AND \_\_\_\_\_\_\_ YOU'VE SEEN THIS PRICED IN YOU'VE SEEN THIS PRICE IN SUBJECT TO ANY DISCOUNTS). NOW . . . TO ZEE DISCOUNTS. PURCHASE \$500.00 OR MORE . . . TAKE 10% OFF. PURCHASE \$900.00 OR MORE . . . TAKE 20% OFF. PURCHASE \$1,600.00 OR MORE AND TAKE A WHOPPING 30% OFF OUR LISTED RETAIL PRICES PLEZE NOTE: ALL OF THE ABOVE LISTED SPECIES ARE IMPORTED, FLOWERING-SIZE PLANTS. ADVANCE FEATURES FOR SALE NEXT MONTH: TWO CRACKED FLASKING BOTTLES AND THREE BALES OF STERILIZED COTTON. PLEASE ADD \$10.00 (Hawaii, add \$20.00) TOTAL FOR SHIPPING, HANDLING AND AIRMAIL POST-AGE FOR ANY OF THE ABOVE SELECTIONS. California residents, please include 6.5% sales tax. Bare-roat anti-ALL REAL R. J. Rands Orchids 421 WESTLAKE BLVD. MALIBU, CALIFORNIA 90265 PH. (818) 707-3410 root only. PLEASE NOTE: Range open by appointment only.

# American Orchid Society Bulletin, Vol. 57(2), 1988



American Orchid Society Bulletin, Vol. 57(3), 1988



American Orchid Society Bulletin, Vol. 56(3), 1987



#### Cattleya, neueste Meristemsorten:

Blc. Segundina Vizcarra 'Carmela' C Sic. Hazel Boyd 'Sunset' AM/AOS × m C. Irene Holguin 'Sweet Spring' AM/AOS C Bro. sanguinea var. alba 'Dream City' AM × m Lc. Gila Wilderness 'Red Flare' HCC/AOS C Ctna. Joy Bassin 'Lea' AM/AOS × m Ctna. Keith Roth 'Excelsior' AM/AOS × m Bic. Toshie Aoki 'Blumen Insel' AM – Ctna. Brandi 'OC' × m Pot. Amangi 'Orchidglade' × StIma. Kelly 'Lea' × m Ctna. Jamaica Red 'Laina' × m	35 DM 40 DM 35 DM 70 DM 35 DM 45 DM 45 DM 40 DM 45 DM 40 DM 45 DM
SIc. Hazel Boyd 'Apricot Glow' x Lc. Chicanery – Blc. Orange Nuggett × m SIc. Hazel Boyd 'March Lion' HCC/AOS × m Bl. Richard Mueller 'Orchidheights' × m Hknsa. Red Face 'Takahashi' × m SIc. Mine Gold 'Corona' – m SIc. California Apricot 'Clyde' HCC/AOS © m © = in 1 Jahr blühstark, × = blühstark, – = in 2 Ja stark, m = Minicattleya	40, DM 50, DM 50, DM 28, DM 25, DM

Sonderpreise Dendrobium	
unicum	7 bis 14 DM
trigonopus	7,- bis 15,- DM
margaritaceum	8,- DM
bellatulum	8,- DM
parishii	10,- DM
jenkinsii	10,- DM
loddigesii	10 DM
aphrodite	12.– DM
draconis	12 DM
crepidatum	10 DM
scrabilinguae	10,- DM
falconerii (stark)	18,- DM
fürstenbergianum	10,- DM
amethystoglossum	16,- DM
Rodriguezia sekunda	15/25 DM
bahaiensis	20 DM
Promaenea rolissonii	20/25 DM
Capanemia uliginosa	18.– DM
Nanodes medusae	35 bis 80 DM
Odontoglossum crinitum	25 DM
Cattleya labiata	20,- bis 35,- DM
maxima	20,- bis 50,- DM
loddigesii	15,-/25,- DM
iricolor	60,-/80,- DM
intermedia	15,-/30,- DM
Sophronitis coccinea	10 bis 20 DM
cernua	10,- bis 25,- DM
rosea (selten!)	25 bis 40 DM
brevipedunculata	15 bis 40 DM
Oncidium phalaeriopsis	30,-/40,- DM
dasystile	30,-/40,- DM
crispum	25,-/35,- DM
pumilum	15,-/25,- DM
sanderae	50,-/80,- DM
onustum	15,-/25,- DM

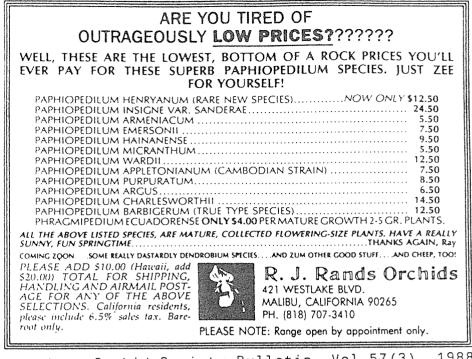
# **3180 wolfsburg 12** (fallersleben) sandkämperstraße 1

telefon: 05362/3314 und 05362/63772

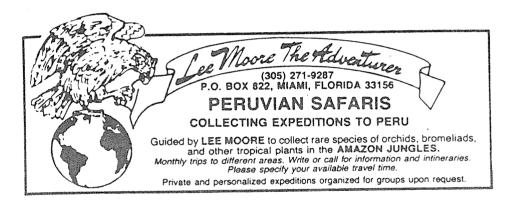
_	
Cycnoches pendactylum	40 DM
Oncidium liminghei	18,-/30,- DM
ottonis	20,-/30,- DM
Laelia	
bradei	15,-/25,- DM
crispata	15/35 DM
gloediana	15,-/40,- DM
mulleri	20,-/40,- DM
pumila	15,-/30,- DM
sincorana	20/40 DM
sulina	20/30 DM
itambana	20,- DM
teretrecaulis	25,- DM
kautzkyi	20 DM
harpophylla	20,-/30,- DM
Epidendrum porpax	15/20 DM
sophronitis	25,- DM
Maxillaria lepidota	30,- DM
Odontoglossum praestans	50,-/60,- DM
	50, 700, Divi
Phragmipedium lindenii	60,-/80,- DM
caudatum	50,~/80,- DM
boisserianum	50,- DM
percei	30,- bis 60,- DM
Masdevallia (Seltenheiten)	
exaltata	60 014
	60,- DM
strobelii	30,-/40,- DM
urosalpings	40/50 DM
prodigiosa	30 DM
lamprotyria	60 DM
wellischii	60/80 DM
davisii	40,-/60,- DM
veitchiana	25/35 DM
ayabacana	40 DM
Dracula simia	50 DM
Oncidium Variegata Hybriden, Meriste	msorten
fast blühstark bis blühstark	
Onc. Booth AM	
Onc. Golden Louis 'Hopsburg' AM	
Onc. Golden Sunset 'Fumi' AM	
Onc. Golden Sunset 'Kimi' AM	
Onc. Midas AM	
Onc. Puff AM	
Onc. Robefield 'Hakalau' AM	
Onc. Robefield 'Tagasaki' AM	
je Pflanze	12 DM
5 Stück	50 DM
Tillandsia albertina (rote Blüte)	12 DM
cacticula	12 DM
filifolia	8 DM
gardneri	8 DM
geminiflora	8 DM
kautskyi	12 DM
magnusiana	8 DM
straminea	12 DM
tectora	12 DM
unca (rote Blüte)	12 DM
utriculata	10 DM

Mindestauftrag 80,- DM, Ausland 150,- DM. Verpackung ist kostenfrei. Portoberechnung wie verauslagt. Kein Nachnahmeversand. Besuche bitte vorher tel. anmelden!

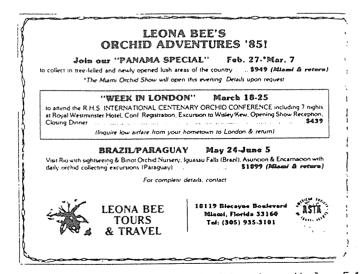
Die Orchidee, 39(1), 1988 102



American Orchid Society Bulletin, Vol 57(3), 1988



American Orchid Society Bulletin, Vol. 55(10), 1986



American Orchid Society Bulletin, Vol. 54(1), 1985

#### : Occurdes 36 (2), 1985

y Keung

ž

	•
האינייני איניין איניין איניין איניין איניין איניאיזאאר איניער איניער איניער איניער איניער איניער איניער איניער איניער איניער	Intel 1: 134, 13, 134, 134, 134, 134, 134, 134,
MC - 1001 ANU MC 0417 051 115 015 0148 01	Onc. variegate Meristeme (blubarin ca. (, bis 1, Jahr)
-MARIN - WERE THE DESCRIPTION - HERE THE PARTY - HERE	8586 548"- UNA 500"- DIN
Anterestinent: 5 versch bol Orchiden unserer	netro? Of regido ente el membrostmase0 : lodegnA
Eucyclia, istrefuteureum 30, 140, - Dw	MG = ,0h (hA-mM) snellur-sche ,2nO
MO - OF UL SE CARACTER AND AND - OF OF	MG - 25,25, 25, 20, 25, 20, 25, 20, 25, 20, 25, 20, 20, 20, 20, 20, 20, 20, 20, 20, 20
MG 52/ 02 50 152 P(#)+	Ouc drianeese II soon So'r Drie
0 - '52'- 00' Silversterg	Onc. threather allow Form) 25 Million (Januar 200
763 767 061 77	Angebot je sine obig, 4 Sorten stati 80 nur 60 Did
Ondution instant 25 - 735, - DM	Orc compressionle 30, DM
Verschiedene Arten	Orc outinense 1 20, - 720, - DM
start ca. 160 nur 100 Dar	Onc. acandens 15 720. DM
	Oncidium variegate, Maturformen
II Jodegnå	MO - 'SE/- 'SI avere upo
statica 170,- nu 125, - Duni	Odm, renstecht (Min-Art) 25, 765, 7M Odm, censtecht (Min-Art) 20, 7M
monyo Provide Do scandens, Onc guarantes, Inconstructures, Onc guarantes, Managarantes, Managarantes	NO OC (qyT tellinus) muleoras mbO
Minute	Odm. stelletum 15, -720, -725 DM
1 Todeprå	Odm, pulchellum 25. DM
NO - 527-151 Provide 1 104005	Odonitogiossum grande
100 - SZ/ BL OSLOUD UNCLOSE SIDE	
MG = 191 reduod upwult sounds unionabridg MG = 151 al automatics unionabridg	80 - '51 Jul - '091 1818 8 8 9 9 9 9 9 9 9 9 9 9 9 9 9 9
WO - SE HOUDDURY STIRIDOTES	Sortiment je eine obiger 7 Maadevallien
Million - 251 - 200 - 201 - 20	NO - 181/-151/-121
MO - 1817 - 151 (250)090000, 10001590	WO - 52/- 02 8/080
MO - 52/-52 2000 - 50/-52 2000 - 50/-52	Multi SOI - 1221 - 0M
NOT-1251-191 IN THE MANN	MG - SC/ - OC #SO/DO/d
MQ = 151 saibabati (1.0900488) MQ = 151 saibabati (1.0900488)	disroduces (warm/duffend) 60,-765,- DM #frenusta 20,-755 - DM
(bredieldrieti ella) resbirtororutainili	nollisvobsald
Berdenti vii schumannennen Jungofanzen Berdenti vii schumannen (2 715, - DM	10° 15° 15° 15° 12
MO 'SL exclusion, reduced and the second and the se	Paph, suknakula var giganleum 25, - DM
MC = 152 Strawing at 100000000000000000000000000000000000	NU - 081 - 08 0901 1 11900150 10080
Epideoruma raitoritaris sellen 25 DM	Paph belistulum 15, 720, DM
Encycka starting interio 35. DW	MO . Otraiti
MG - 'SE/-'SZ	Paph bodegomi, 1 Treb 60, - DM
Гаера Биция Гаера Биция 52' - 132' - 04 52' - 100' - 04	MO - SC/- SZ while
10UHR 52'-120'- DW	WG - '09/ - '05 within duted
Trebookia survis Bluten 25730 DM 25730 DM	MG – ,08 nun –,001 mita netro2 regido ente el todegnA
NO - OZ/-'SI WEISUNKLISCI SHISHNDO	Paph, verustum "Bhutan" 15, – DM. Paph, verustum "Bhutan" 15, – DM.
MO - '05/-'01 "HUMAND	MCI - 'SI WILLSOUGH WORD
MG - '56/-100 numbers MG - '56/-100 numbers	DEDY SOCERED IS. UM
MG - SE/= 30 - 20 - 100	MG SI wayayans yard MG -121 wasaya ward
100 - 1009 (US2UELA SOURA POULO, US PD )	multoookidea
.pidentt .20A/MA tynneT muniplinatition rigis?	etodegnaneebitton0
MO - OF/- OC WEISUNG HEP". ED EIDISODIAL HOUELEY	
MO - 'SH- 'SC SUBSCIPTION IS I SOUND IS A SUMMARY IN THE	sandkamperstr. 1, telefon: 0 53 62 / 6 24 61
MO05 201 H. A.	-
NO -'SI	👾 Nodod 🖉
MG = SI SUP RUPPING	

401

 $\bigcirc$ 

----

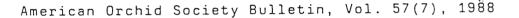
– 9 ə3sđ –

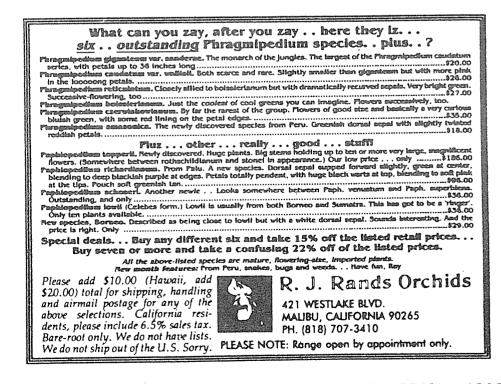
## BERGSTROM ORCHIDS **SPECIALS FOR THE MONTH OF JULY 1988**

At Bergstrom Orchids we carry a large selection of laeilas, encyclias, and oncidiums with fresh plants coming in from the Americas all the time. Send for our free brochure. We mail order all over the United States at \$6.00, one plant to one hundred.

If we don't have the species you want, we can get it. Nearly all our plants are priced from \$6.00 to \$15.00.

Bergstrom Orchids Nursery, 494 Camino Manzanas Thousand Oaks, California 91360 (805) 495-1792





American Orchid Society Bulletin, Vol. 57(8), 1988

105

Here goes our second offering for the ORCHID DIGEST. I hope that you might find some interesting and worthy species herein. I will be starting off with a mighty expensive item but, as you see, not all our plants are in the upper strata price brucket.

PHRAGMIPEDIUM BESSEAE, ECUADOR — Read the article and you have all that you need to know about this one. They do not appear to be hard to grow; just pay for. I have about 15 of them to sell at prices from \$300 to \$500 depending on amount of leads, etc. I hope that I still have an ample supply at the time that this comes to press.

BARKERIA PALMERI AND SCANDENS, MEXICO — Both of these are mighty handsome and worthy of a place in any greenhouse. I simply hang them by monofiliment fishing line and get very good results. The *palmeni* can produce an absolutely extraordinary abundance of blooms. Both flowers are of the color of pale pink to lilac. They do not much care for water in the winter ......\$20 each

BRASSAVOLA CUCULLATA, MEXICO — Another of the rattails, this time with a pure white color. The bloom is exquisite. Sepals 

### ORCHIDS FROM THE AMERICAS ARE OUR SPECIALTY

At Bergstrom Orchids we carry a large selection of Laelias, Encyclias and Oncidiums with fresh plants coming in from the Americas all the time from Mexico, Central America and South America.

Note that most plants are sent bare-root. Specials are good for three months from the time you receive your Digest. Supply is limited in some cases but most can be supplied later if sold out.

BERGSTROM ORCHIDS PRedominantly Species 494 Camino Manzanas Thousand Oaks, Ca. 91360

GREENHOUSE HOURS: 9:00 to DARK 7 DAYS A WEEK BILL BERGSTROM (Owner) (805) 495-1792



SEND FOR OUR FREE BROCHURE. WE MAIL ALL OVER THE UNITED STATES AT \$6.00 TOTAL. ONE PLANT OR ONE HUNDRED.

ROCHURE. WE MAIL ALL OVER THE OTAL. ONE PLANT OR ONE HUNDRED. - Cold weather can delay shipping. SORRY no overseas delivery is possible at this time.

Orch. Dig., Jan.-Feb.-Mar., 1988

... سر به مع مر ا 

and a state of the I refer to your uniter to Ing. Crysque Consta datad Satabar 25, seventing information contening the gampa Chragnipadium. 17.00

n n n n n n n n n

1020 Gaugeting information concerning the genus Shragnipedium. I have this four into the second free with the information that I have this concerns a period free 1700 to the present date. At the needs I to active as the leadination of the Gatie Broup of (2000%) Moran concerns of 7.000 on the Feral Torat is the relation of the relation of the constant of the contractions, for hold of the leader of the constant of the second constant. The second of the transformer of the constant contractions, for hold of the torat of the constant. CITED programs the constant of contraction from Peral with a CITED Expert for the constant, for the constant for a constant of the constant. CITED programs the constant, for the form Peral with a CITED Expert for the constant, for the form peral with a CITED Expert for the constant, for the form consulted by the that there is no scientific authority being consulted by the Management Authority for the identification of the species to be exported, and if the numbers of orchids to be exported might endanger the permal population in the area from which they were collected. The permit are 1) the experter must have the erchids identified (in theory but not in actual practice) to genus and species by **any**, 1 repeat, any titled biologist, and 2), the, must present the receipt showing that payment has been made to the Ministry of Agriculture for, the extraction of the orchids from the forest. This is a very very small (as. The biologists are not examined by the Ministry of Agriculture to determine their qualifications to make the decisions required by the CITES agreement. There is no list of authorized, qualified biologists to make identifications of bromeliads, cacti, eachids or palm species. With such an obviously deficient arrangement mismanagement occurs constantly and corrupt practices become common. Essentially, the <u>experter</u> makes up his list of species and pays any tiologist a fee to sign the declaration for the CITEC Expert Permit. So to sum up the peruvian CITES situation for prohid exports: all orchids are exported without identification by a competent, impartial, scientific authority, and no consideration whatsesver is given to the population status in their natural habitat. This effectively defeate the purpose of the Cites agreement, and by definition extension should be termed illegal. The Feruvian CITES management authority is a political appointse lissuing CITES permits without complying with the terms of the agreement. The last CITED Menagement Authority also Director General de Ferestal y Fauna hels his position for about 3 years before being replaced. Favored experters got their permits, and even went to far as to influence the authority to deny permits to competitors.

PERMI IC NOT DOMELYING WITH THE CITES AGREEMENT AND IC NOT USING IT TO FROTEST THEIR OWN FLORA AND FAUMA, AND THEY CONTRIBUTE TO ILLEGAL TRADE IN EACHINE AND EACHI FREM CHILE, EEUADOR, MEXICO AND COLOMDIA.

1

New York and the second second

And illich white provide a study, it present our solubilities ranker and fillich which ago is present definition is any local to ing. Marin Readon To the OFTE records a contact to the Readon to be foregriss and back of a fillic records were an answer, even though I which is a solution of the readon to year answer, even though I which is a solution of accept read were helding provenants below is a solution of accept regentions from the private solutions as solution of accept regentions from the private solution of accept of the second to be accepted to accept the below of a contact the private of private of private rations for that the private of accept of private rations for that the private of accepted the second to be discovered the rations for accepted the second to be accepted to accept the rations for the first of the second to be accepted the rations for the second to contact the second to be accepted the rations for localities of an accepted to be accepted to accept the rations for the second to contact to be accepted the rations for localities of accepted to be accepted to accept the second of the localities of accepted to be accepted to be accepted to expectations of T. because.

<u>Chrasmipsdium saudatum.</u> Norrelly pitter epiptytic, terrestial or lithophytic. At one time in the period 1920 to 1975 it use common in the Departments of Period, Meanue, and Cusce along the readways where it is new vertually extinct. It such a long the readways where collected very beavily for expert. It is such a large, showy plant that the inhabitants living in the jungle grow it in large time can be front of their houses. Its conter made is the "Decen's Clipper". Mary hondreds have been brought to Lima in flower by paravian tourists. But infortunately they seen die due to the fact that liber collection is clualing. This species is now very difficult to first is comparial numbers i.e. 15 to 25 whereas before it was easy to collections to 200 from a chall locality covering 10 to 20 hostings. First species is indengened gates periodly despite its was easy to collect for for the conter could due to the fact that liber collection of the formation of the species is now very difficult to first is comparial numbers i.e. 15 to 25 whereas before it was easy to collect 500 to 200 from a chall locality covering 10 to 20 hostings. This topolog is indengened gates periodly despite its was easy to collect for four read between Comparia and Car famous in the proof for for famous 20 hosting to be a large topolog where it was easy for first for famous 20 hostings to 1250 hosting deploted. The most for famous 20 hosting the set book shows be a deploted in the proof for famous 20 hosting the set of the they been collected as tensively, theory out, and the undertruct burnt. Nation collected as tensively, theory out, and the undertruct burnt, habited controling the formation are along and from Car Famous could the normal population would for the despite the context of a constant of the read from the Carpanga and vise from the family the family of all version to Carpanga and vise from the beam of the read from for the Carpanga and

. .

2 <sup>1</sup> A Provide a state of the second state of the state of the state of the second state of the second state of the state 

A set of the set of the set of the localities of the set of t pending wany hundreds of Mazdevellias to the Konnigers and another Surman intentar in Murches. In the publicity years he has avpauded htt supertotions in include all of the Phragnipediums and a great variety of muniature or compact growing species of a variety of genera.

Phragespldium flateif is confuned by many with <u>Phragmizidius</u> course which is not common on Poru, but C. Acarcii was very comparents in 1975 no loss than 10,000 plants of <u>P. Pearcii</u> were systematically collected and experted in anly a few shipments by one percylar experter. This species normall, grows along swift streams on exposed bard models where water splashes on the rest system. It branches (requestly and forms mats of 20 to 50 mature (lowering stams. The collector contracted families in the Department of Can fortif to sake a buga collector of 40,000 mature mate of  $\underline{P}_{\cdot}$ <u>Prancif</u>. The tayment was the equivalent of U.D.400.05 per mature sate This species, due to its small size and prelific growth havin has marked it for excinction by the great decard for this compact spacies. <u>C. seuddorense</u> is ghits then in Fern and is recognized by its larger plant size and distinctive stationds.

Chrasmipedium carisinum and C. reticulatum and Eath spacies which is not have large populations and therefore much more subject to imminent danger of deplotion.

There is every, indication that the genus <u>Phrasmipsdium</u> is parisuply endangened as leng as Teru does nothing to protect theur

St pmbl gersionin یا سرمردی از با مردر و . ما مانیان از ایران (۱۹۹۵ ز. ۱ ensus press lister (ast) res fragmental i artic 13 (P

.

í 14 Ms Lydia Klös Zoo Wuppertal Hubertusallee 30 5600 Wuppertal 1 Fed. Rep of Germany

28 November 1988

Dear Ms Klös

Thank you for your letter of 8 November about Phragmipedium.

The trade in species of <u>Phragmipedium</u> has undoubtedly increased dramatically in the past few years and I have seen large importations both in California and Europe of jungle-collected plants.

So far as I know two species are particularly threatened by this trade. These are P. exstaminodium from Mexico and P. besseae from N. Peru and Ecuador. I have been told by reliable sources that every known colony of the latter has been stripped by collectors such is the demand for it.

I would suggest that you try and get first-hand information of <u>P. besseae</u> from Dr C Dodson, Casilla, Sucursal, Quito, Ecuador, and Mr Stig Dalstrom, Gylletorget 20, 78132, Borlange, Sweden, both of whom know this species in the wild. For <u>P. exstaminodium</u> you should contact Sr. Ing. Eric Hagsater, Apartado Postal 53-123, 11320 Mexico D.F., Mexico.

Dr Dodson will also be able to give you information on other Andean species.

I would luck to wish you good luck with your project.

Yours sincerely

July City

Phillip Cribb

dmc

.. ..



SUBSECRETARIA DE ECOLOGIA DIRECCION GENERAL DE CONSERVACION ECOLOGICA DE LOS RECURSOS NATURALES DIRECCION DE FLORA Y FAUNA SILVESTRES RIO ELBA # 20 - 80 PISO. COL. CUAUHTEMOC, 06500 MEXICO, D.F.

Oficio No. 412.2.1.0.0. 4952

SECRETAPIA DE DESARROLLO URBANO Y ECOLOGIA

CIUDAD DE MEXICO, 14 DIC. 1988

SR. ULRICH HEAD OF CITES-MANAGEMENT AUTHORITY BUNDESAMT FÜR ERNÄHRUNG UND FORSTWIRTSCHAFT POSTF 18 02 03 6000 FRANKFURT/MAIN 1.

Por este conducto me permito comunicarle que recibimos ubresero. una carta de Lydia Klos, de la Sociedad Zoológica de -Frankfurt, con fecha 4 de octubre del año en curso, en la cual nos pide información de Phragmipedium /spp, sobre su estado poblacional; distribución histórica y ac tual, alteraciones o destrucción de habitat, uso y valor comercial y su tráfico legal e ilegal.

La razón del interés por esta información se debe a que desean proponer la transferencia de este género de or quidea del Apéndice II al Apéndice I de CITES.

Por lo anterior, anexo le envio información proporcionada por la Asociación Mexicana de Orquideología, A.C., sobre dicho género en México. Así mismo, nos unimos a la opinión de dicha Asociación en el sentido de que las especies del género mencionado no sean transferidas al Apéndice I del CITES, en virtud de que dichas especies no son comercializadas y están próximos a realizar diversos estudios entre los que se pretende su propagación.

Cabe señalar que nos ha extrañado que una Sociedad Zoológica, nos solicite información sobre especies vegetales, es por ello que si usted considera prudente, se -remita la misma a la siguiente dirección.

> LYDIA KLOS ZOO WUPPERTAL HUBERTUSALLEE 30 5600 WUPPERTAL 1 FEDERAL REPUBLIC OF GERMANY

Sin otro particular, le reitero mi consideración más -distinguida.

SUFRAGIO EFECTIVO. NO REELECCION. LA DIRECTORA GENERAL.

DRA. GRACIELA DE LA GARZA GARCIA

Copias a la vuelta.

FORMA CG. TA

12. 1. 19

X bits Surriben



Lydia Klös Zoo Wuppertal Hubertusallee 30 5600 Wuppertal 1 ALEMANIA FEDERAL

Dear Ms. Klös:

Thank you for your letter of October 25th, which just reached me. I had already had notice of your interest through our Ministry of Ecology.

There are two species of *Phragmipedium* in Mexico; *P. exstaminodium* Castaño, Hágsater & Aguirre, and a new species which will soon be published and related to *P. schlimii* and *P. besseae*, which we recently discovered in southern Mexico. I enclose a reprint of the original description of the first species, which was confused in earlier publications with *P. caudatum* Lindl. which does not occur in Mexico or Central America.

Both Mexican species are very rare, known only from a few specimens and one or two localities. We have an ongoing conservation project for P. exstaminodium partly funded by WWF-US to try and locate viable populations and see the possibility of their conservation. It is most probably also found in recently decreed protected areas. It is also our intention to promote its artifical propagation. As to the new species it is known from one small colony only and several plants have been distributed to reputed grower-propagators to try and reproduce it and through propagated plants introduce it into cultivation. The type locality is kept secret so as to protect it and is found in an area which has been proposed as a natural reserve under the MAB (Man and the Biosphere) programme, in escence, the natural habitat is protected.

Due to the scarcity of both species, neither is in commerce, although about 100 plants of P. exstaminodium were once introduced as P. caudatum into the United States, about 15 years ago.

Regarding the idear of putting the whole genus in Appendix I of CITES, we do not agree with such a strategy, because we believe that Appendix I in practice makes it impossible to promote the propagation of such species in tropical countries, which is a way to insure its conservation by diminishing the demand for wild collected plants, and promote local income. Thus, although it is not the intention of CITES, practically, due to the way CITES is applied in the USA, it would be in practice very difficult to export propagated plants to the main markets, and thus nobody would be interested in propagating it in the countries of origin, and only illegally collected wild plants will be smuggled into the United States. This is especially true for such rare species as ours. You would in fact be putting a very high price on each plant, and they are so easily smuggled, that it would be impossible to control.

# ASOCIACION MEXICANA DE ORQUIDEOLOGIA A.C.

LAGO TANGAÑICA No. 18 COL. GRANADA 11520 MEXICO, D. F. MEXICO. 
 TEL. 531-4349
 APARTADO POSTAL 53-123

 11320
 MEXICO, D. F.
 MEXICO.

As an additional comment, I may add that I just returned from Ecuador, where large amounts of P. besseae were sold. Though originally thought to be very rare, it has turned out to be a common species found along the eastern Andes from Perú to Colombia, usually in inaccesible places which can be neither burned nor used for agriculture, and thus the natural habitat seems very safe, and although some localities have been completely depleted of their plants, many other localities are safe. In addition I was able to observe how Father Angel Andreetta in Cuenca cultivates and propagates the spiecies easily with new growths produced from old stolons. Thus, although the species is now extinct in the type locality in Perú, it seems in no serious danger of extinction in the wild. Its propagation by vegetative division in the Andean countries seems a very worthwhile commercial project for export.

I would strongly recommend you follow the Tokyo findings of the Conservation Committee of the IOC (International Orchid Conference) and the Orchid Specialist Group of the IUCN, in relation to adding more species to Appendix I of CITES. I strongly believe it would be counterproductive.

In addition, please bear in mind the orchids are not animals. In the case of animals, you generally need two consenting adults to get one or a few offspring, whereas you may produce very many new individuals from orchids by various means: vegetative division, artificial pollination and production from seed in controlled conditions, and meristem tissue culture (in many, but not all species). It is very unfortunate that CITES. as originally concieved for animals has been applied to the plant kingdom as such, when plants behave in a very different way, and orchids in particular.

If you need any more information, please do not hesitate to write, this is a subject in which I have taken much interest for many years, as a scientist with no commercial interests.

Looking forward to hear from you, I remain,

Eric Hágsater Herbarium Director

ccp. Joyce Stewart, OSG-IUCN Philip Cribb, Kew



BELIZE Please Quote No. F1/3/1/88(89) Ministry of Agriculture, Forestry and Fisheries Belmopan, Belixe C.A.

October 17, 1988

Lydia Klos Zoo Wuppertal Hubertusallee 30 5600 Wuppertal 1 Federal Republic of Germany

Dear Ms. Klos,

Thank you for your letter dated 22nd September, 1988. There is no available information at our disposal concerning the status of the American slipper orchids in order to give an objective view on your proposal.

₩e

support your representation on the matter.

Yours sincerely,

OSCAR ROSADO Ag. Chief Forest Officer

### TRAFFIC(U.S.A.)



Dear Mrs. Klös, 11/9/88 Faith Camphell ashed me to send the enclored orchid trade information to you. Surrerely hili: Sheeline

(over) World Wildlife Fund

1250 Twenty-Fourth St., NW Washington, DC 20037 USA 202/293-4800

Telex: 64505 PANDA Fax: (202) 293-9211 Lili Sheeline Trade Campaign Coordinator (202) 778-9678

PARTIAL SUMMARY OF PERVUIAN ORCHID EXPORTS IN 1987 TO THE U.S.A.

## 

 2. GELBERT ISERN BALILENIA (ONE SHIPMENT OF 2000 CATTLEYA VIOLACEAS)
 3. JORGE MEZA TORRES-- (ONE SHIPMENT)
 4. MANUEL ARIAS D. (TWELVE SHIPMENTS)

Cr. Manuel Ariaz S. has openly admitted he shipped from Peru plants of Phragmipedium bessear to J.L.Rands Orchids in the U.S.A. This species is very nearly extinct in Peru due to excessive depredation in the part 5 years, and we alerted La <u>Dirección General Forestal y</u> <u>de Fauna</u> to this situation with no acknowledgement whatever from Inc. Marco Romero P., Director General.

Ing. Marco Romero P., Director General. Dur study of the exports shows that there is no competent Scientific Authority within Forestal to identify the species to be exported. More important is the fact that nothing is known by the authorities about the ecological effect on the population from which the orchids were collected and whether or not the removal will cause endangerment to the survival of the species. This rather defeats the whole purpose of the Convenio. These collections are not in any way facilitated by logging operations. They are highly selective.

La Dirección Forestal General y de La Fauna has stated they are primarily interested in the fact that orchid exports produce divisas for the country. In order to maintain an appearance of legality they request that each solicitud be accompanied by 1) a Declaración Jurado del Valor of the shipment, 2) a certificate of plant identity which must simply be signed by  $\frac{any}{2}$  Biologist. In the case of legitimate scientists with full credentials wishing to export plants they must submit their plant or animal material for identification by competent personnel of the Museo de Historia Natural 'Javier Prado' and agree to leave speciment with the museum or zend them back to Peru after the research has been completed.

Commercial collectors are not requireed to leave any specimens with the Peruvian institutions, and send out the great majority of their jungle collected specimens without flowers. We take note of Forestry's great interest to produce divisas for PERU. We offer the following information collected from various sources such as <u>The</u> <u>American Orchid Society Bulletin & werow copies of the 1787 Cites</u> Export Permits from Peru.

Orchid Plants	1987 (nearly 98%) Value declared to Forestal US\$ 1.50 ea.	Commercial Value Total U.S.A.
	•	

# 7,200 U.D:\$ 10,000.00 UD\$ 123,301.00

We recommend that the Ministerios of Comercio, Economia y Finanzas be consulted about the method used by the Ministerio of Agricultura to insure the declaration U.S. dollars produced by the <u>actual sales</u> of the orchids. Where are the invoices???

1



Natural Resources Defense Council

1350 New York Ave., N.W. Washington, DC 20005 202 783-7800

0

ls

13 October, 1988

Herr Rainer Blanke Bundesamt fur Ernahrung und Forstwirtschaft Adickesallee 40 D-6000 Frankfurt am Main 1 FEDERAL REPUBLIC OF GERMANY

Dear Herr Blanke:

I understand from Ger van Vliet that Germany is considering initiating a proposal to transfer the orchid genus <u>Phragmipedium</u> to Appendix I. I wish to provide the following information in support of your efforts.

I enclose photocopies of the U.S. Annual Report data showing U.S. imports of the genus in 1985 and 1986. The latter is from the preliminary computer printout rather than the final report, but I expect that it is accurate.

I enclose further a computer printout showing U.S. imports of the genus from Peru only in 1987. I compiled this record directly from the CITES documents on file with the Office of Management Authority, so it is unofficial.

Environmental activists in Peru have complained to me frequently about the extent of trade in wild-collected orchids from that country. I have written to them today, urging them to compile all information available to them about <u>Phragmipedium</u> trade and the status of various species in the wild. I will forward that information to you as soon as it becomes available.

In the meantime, I will try to find time in November or December to update my own file on <u>Phragmipedium</u> imports (that is, imports from Peru in 1988; imports from other countries in 1987 and 1988). I will forward this information to you as soon as possible.

I will also explore other sources of expertise on the genus. As you know, many orchid experts are hostile to CITES, so it may be difficult to find people willing to cooperate.

10017. Recycled Paper	New York Office:	Western Office:	New England Office:	Toxic Substances
	122 East 42nd Street	90 New Montgomery	850 Boston Post Road	Information Line:
	New York, New York 10168	San Francisco, CA 94105	Sudbury, MA 01776	USA: 1-800 648-NRDC
	212 949-0049	415 777-0220	617 443-6300	NYS: 212 687-6862

I regret that you will not be at the London meeting. However, I promise full support in this and other endeavors. If you wish any information about U.S. dealers trading in either <u>Phragmipedium</u> or <u>Paphiopedilum</u>, please let me know.

Sincerely,

1 La Marga Carpell

Faith Thompson Campbell, Ph.D.



Pet Hospital

Apache Plaza 3700 Silver Lake Road #15F St. Anthony, MN 55421 (612) 789-5855

12/28/88

Mr. Dave Bennett Asociacion de Ecologia y Conservacion Vanderghen 560-2A Lima 27, Peru

Dear Mr. Bennett:

I was given your name by Ms. Eva Eckenrode at TRAFFIC(USA) as you may be interested in my comments on cultivation of various Peruvian orchid species in the USA and also thier importation into this country.

I am an amature orchid grower specializing in orchid species that grow at higher elevations from around the world. I also have what might be described as an intense interest in tropical forrest conservation and ecologically sound forrest management alternatives.

Some projects I am considering are: 1. propagation from seed and reintroduction of various rare montaine orchid species into protected habitats in thier countries of origin. I would be willing to donate seedlings for this purpose. 2. maintianing a cryogenic seed bank of as many orchid species as possible in conjunction with the American Orchid Society (if not already being done). 3. conducting experiments to determine the long term viability of orchid seed in cryogenic storage and methods to enhance that viability.

I have examined the documents recieved summarizing Peruvian orchid trade for 1987. My comments are as follows. Phrag. besseae is still being exported from Peru, a company in the US (J and L orchids) recieved a shipment this month from an exporter in Peru possibly identified as Phrag. boisserianum. The following species were exported in far greater numbers than listed or were exported and completely omitted from the list; Masdevallia lamprotyria, M. dura, M.pumila, M.ariasii, M. aphanes, M.ensata, M. deformis, M. weberbaueri, M.mendosae, M.tubulosa var. syringiodes, M. kuhnorum, etc. Species listed in the documents as exported from Peru are not known to exist in that country, one that most notably stands out is Nanodes medusae from Ecuador. Prices listed for value of plants in US\$ are on average 25% undervalued.

Please send any information about ways that I can help your efforts to the above address. I am also planning on working with the American Orchid Society on the above issues soon.

Thankyou for your time and consideration.

Sincerely, Mark Wiesman

. . .

 $\bigcirc$ 

•

. . . .

.

