CONSIDERATION OF PROPOSALS FOR AMENDMENT OF APPENDICES I AND II

Other proposals

A. Proposal

Transfer from Appendix I to Appendix II of the Argentine population of *Pterocnemia pennata pennata*, taking into account the precautionary measures contained in Annex 4, section B, paragraph 2.b) of Resolution Conf. 9.24.

B. Proponent

Argentina

C. Supporting Statement

1. Taxonomy

1.1	Class:	Aves	
1.2	Order:	Rheiformes	
1.3	Family:	Rheidae	
1.4	Genus, species:	*Pterocnemia pennata* d'Orbigny 1834	
	Subspecies:	*Pterocnemia pennata pennata*	
1.5	Scientific synonyms:	*Rhea pennata*, *Rhea darwini*	
1.6	Common names:	English:	Lesser Rhea, Darwin's Rhea
		French:	Nandou de Darwin
		Spanish:	Ñandú cordillerano, Avestruz de Magallanes, Choique, Molochoique, Ñandú petiso, Suri cordillerano
		Aymara:	Suri
		German:	Darwinnandu
		Italian:	Nandú de Darwin
1.7	Code numbers:	(CITES)	A-202.001.001.001

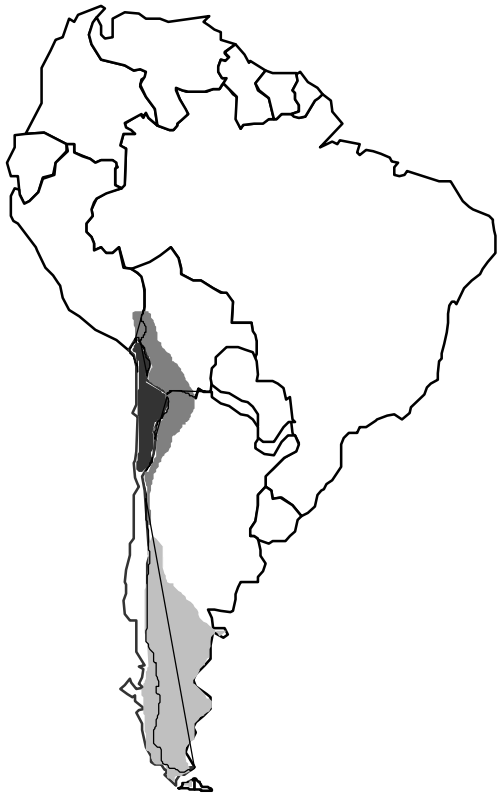
2. Biological Parameters

2.1 Distribution

The species *Pterocnemia pennata* occurs only in South America. There are three subspecies; one subspecies, *P. p. pennata*, is found in southern Chile, west central and southern Argentina and on the island of Tierra del Fuego, where it was introduced (Del Hoyo et al. 1992) (see figure 1). The other two subspecies, *P. p. garleppi* and *P. p. tarapacencis*, are found in southern Peru, southwestern Bolivia and northwestern Argentina for the first, and in northern Chile for the second. It should be pointed out that these two northern subspecies are separated from each others and completely separated from the southern subspecies, the subject of this proposal.

The subspecies *P. p. pennata* is found on the steppes of the pre-Andes and on the Patagonian plateau up to 2000 metres above sea level, while the two northern subspecies live on the open plains of pasture and scrub forest on the altiplano of the puno and in the intermontane valleys at 3500 to 4500 metres above sea level (Blake 1977; Del Hoyo et al. 1992).

Fig. 1. Distribution of *Pterocnemia pennata*



Pterocnemia pennata tarapacencis

Pterocnemia penata garleppi

Pterocnemia pennata pennata

2.2 Habitat availability

The habitat currently available to the *P. p. pennata*, all in the Argentine Patagonia, covers approximately 670,000 square kilometres (Navarro et al. 1999b). Some areas within the distribution of this subspecies are subject to desertification, primarily as the result of excess grazing by sheep and, to a lesser extent, through exploitation of petroleum (see section 4.2.2).

2.3 Population status

The first systematic surveys of wild populations of Darwin's rhea in Patagonia were published by Garrido and Kovacs (1982), who provide data from transects along roads in the province of Chubut for the period 1976-1979. Later, Cortés (1992) and Bellati (1992) studied several aspects related to the presence and population trends of Darwin's rhea in the province of Río Negro, based on the 1991 livestock survey. The results obtained by all of these authors are presented and compared farther along in this document.

The current status of the wild populations of Darwin's rhea in the Argentine Patagonia is reflected in the results of the most recent surveys carried out in 1998 in the provinces of Río Negro and Santa Cruz (Navarro et al. 1999b). Sites for this survey were based on the results of surveys carried out in 1997 of ranchers in Patagonia (Martella et al. 1999a), discussed farther along in this proposal. For each phytogeographical region represented in each province, a series

of random surveys were made in order to ensure representation of all categories of populations (0, < 30, 30 to 50, approximately 100, 100 to 200 and > 200).

An estimate was made of the population of Darwin's rhea at all sites selected and on farms next to each site (also selected at random and not previously surveyed). The surveys were made from a slowly moving vehicle along the farm's internal roads, keeping track of the total distance travelled and the rheas observed. The number of birds and their distance perpendicular to the road were recorded. The density of rheas (D) was calculated for each farm in the province of Río Negro based on King's formula: D = n/L2R, where (n) is the number of specimens observed, (L) is the length of the transect and (R) is the average distance between the specimens and the direction of the vehicle.

Later, average density was calculated for each category of bird used in the survey as well as the ecological density in the province. The latter is the result of the average pondered density of each category of population, divided by its relative frequency within the total provincial population. The ecological density of rheas in the provinces of Chubut, Neuquén and Santa Cruz was also calculated in the same manner, but using averages per category obtained in Río Negro.

The rhea's area of distribution was quantified for each province, subtracting from the total area the area used for irrigated crops, urban settlements, Andean forest and departments in which it is known that the rhea does not occur. The total number of rheas in each province was then calculated, multiplying the ecological density by the respective area of distribution. Finally, the total number of rheas in Patagonia was obtained by adding the populations in the four provinces, and the rough density was calculated by dividing the previous figure by the total area of Patagonia.

In Santa Cruz, 468 kilometres were travelled on 19 farms, located in two environmental units (the Mata Negra and the Dry Magallenean Steppe). A total of 291 rheas were sighted. In Río Negro, a total of 445 kilometres on 23 farms in two environmental units (the Monte Alto and the Rio Negro Dry Plateau) were travelled, where 519 rheas were observed. The difference in the number of rheas observed is primarily because of the greater or fewer number of farms with high densities previously selected and variations in the strip surveyed, primarily a function of ground characteristics and the vegetation in each province.

Both the density and the total provincial population of rheas show a pattern of decreasing from south to north (see table 1). Maximum values were recorded in Santa Cruz, and then populations decreased progressively in Chubut, Neuquén and Río Negro. The population levels obtained suggest that rheas are abundant throughout Patagonia and that demographic bottlenecks are not a factor relevant for conservation of this species.

Table 1. Comparison of areas and populations of *P. p. pennata* in the four Patagonian provinces and the regional total.

Parameters	Santa Cruz	Chubut	Río Negro	Neuquén	TOTAL
Average density (specimens/km^2)	2.93	2.51	2.06	1.94	2.20
Total area (km^2)	243,943	224,686	203,013	94,078	765,720
Range (km^2)	225,885	208,003	170,002	78,343	678,868
Total population	662,221	521,898	350,996	152,138	1.687,253

As a reference, during surveys carried out in 1997 on farms in Patagonia the following number of replies was obtained (Martella et al. 1999a): Neuquén (103 replies), Santa Cruz (67), Chubut (44) and Río Negro (36). Standardized forms were used to gather information on the presence, population and use of the rhea. The questionnaires were accompanied by a brochure providing information on this animal.

Although there are differences between provinces in some replies, general trends are similar. For this reason, the data given is summarized for all of Patagonia, based on average pondered values for the provinces for the area of each province.

The results indicate that 25 per cent of those surveyed saw many rheas (>100), 49 per cent saw few (<50), 12 per cent observed an intermediate number (between 50 and 100) and only 14 per cent declared never having seen rheas on their farms. The majority declared having observed nests on their properties (76 per cent), adults with young (78 per cent) and that on neighbouring farms there is an equal or greater density of rheas (81 per cent).

2.4 Population trends

With respect to variation in the rhea population recorded during the past ten years (Martella et al. 1999a), based on the surveys carried out in 1997, 18 per cent of those surveyed declared that it had increased, 41 per cent that it had remained stable and 40 per cent that it had decreased. This decrease is attributed primarily to subsistence hunting (35 per cent of the replies) and to predation by the Andean wolf (*Pseudalopex culpaeus*) (19 per cent). Land use did not vary during this time (92 per cent was used for ranching), most of the ranches had not been divided (92 per cent) and almost all owners (92 per cent) felt that the rhea does not harm cattle or pastures and is not considered a pest.

Field studies confirm these trends, as well as the relative minor influence on wild populations of the factors of predation, hunting and fragmentation of habitat.

2.5 Geographic trends

There are estimates prior to 1997/98 in several provinces of Patagonia.

In the province of Río Negro, the 1991 livestock survey in Patagonia for the period between 1990 and 1991 was answered by 221 owners (61 per cent of those surveyed). Using data from this survey, Cortés (1992) and Bellati (1992) found that 65 per cent of the owners had sighted rheas on their farms. Furthermore, they report that 32 per cent of those surveyed declared having observed a trend of increasing rhea populations. Twenty-two per cent of those surveyed felt that the populations had remained stable, and 45 per cent had observed a reduction in population during this period. It is impossible to identify a distinct trend in wild populations. The authors do not estimate the total rhea population. Nonetheless, they give an estimate for the guanaco (*Lama guanicoe*) of 113,517 specimens. Based on this value and the study by Garrido and Kovacs (1982) in the province of Chubut, who reported that the rhea populations vary in an order of magnitude similar to that of the guanaco populations, the total rhea population in the province of Río Negro can be extrapolated. It is estimated that in 1992, there were between 100,000 and 200,000 rheas in this single province, which corresponds to an approximate density of 0.9 rheas/square kilometre.

For the province of Chubut, Garrido and Kovacs (1982) provide data from transects along roads for the period 1976-1979. The only possible estimate of the rhea population for this period in this province is an extrapolation of these data to the transect along which they surveyed (200 metres on each side of their route). In this way, it is possible to obtain densities in a range of 0.3 to 1.6 rheas/square kilometre. Garrido and Kovacs found a trend of an increase in population during those years.

In the case of the province of Santa Cruz, only data from line transects along roads carried out between 1993 and 1996 are available until now (De Lucca 1996). Again, extrapolation of these data to a transect similar to that used by Garrido and Kovacs (1982) would give a density between 0.03 and 0.2 adult rheas/square kilometre. Nonetheless, these authors noted very marked differences in the abundance of rheas along the routes they travelled. These variations were attributed to greater or lesser disturbance or human access. They observed lighter densities at sites next to internal roads or busy primary roads.

Because rheas avoid contact with persons, most surveys along roads would have underestimated the true population. It would be reasonable to extrapolate a pessimistic estimate of the rhea

population in the Argentine Patagonia in the recent past to have a density between 0.2 and 0.3 adults/square kilometre. Nonetheless, the value of 1.6 rheas/square kilometre is closer to the average of 2.5 rheas/square kilometre recorded during the most recent study (Navarro et al. 1999b). These estimates probably reflect the status of previous wild populations of this species.

Based on these data, the total rhea population in the recent past was greater than 170,000 specimens (a minimum), although it is probable that in reality that population has been more than a million.

Some of the data given above suggests a growth and probable later stabilization of the rhea population in the Argentine Patagonia in the past few years. The number of ranchers in Río Negro who observe rheas on their properties was almost 20 points greater in 1997 than in 1991 and the number of those who reported a probable reduction in population was 5 points less in 1997 than in 1991. There is, however, an increase in those who mentioned in 1997 that the population is probably stable.

Finally, estimated population densities based on field observations were substantially greater in 1998, compared to any surveys carried out in the past.

2.6 Role of the species in its ecosystem

Although this subspecies is an omnivore, its diet is based primarily on vegetation. Bushes and undergrowth form its main diet (61 to 75 per cent), followed by grass and Gramineae. Its diet shows a high trophic level, especially in the early summer, in comparison to other domestic and wild herbivores sharing the habitat. Nonetheless, its diet overlaps very little that of domestic livestock (between 8 to 30 per cent), but to a slightly higher degree with that of the European hare (*Lepus capensis*) (13 to 30 per cent) and the *avutarda* (*Chloephaga picta*) (11 to 21 per cent). These data suggest that mixed grazing of these species ensures full use of pasture (Bonino et al. 1986).

The degree of trophic overlapping of this species with the other indigenous rhea, the common rhea (*Rhea americana*) listed in CITES Appendix II, is unknown in the area where distribution of both species overlaps (north-northeastern Río Negro province and southeastern Neuquén province).

2.7 Threats

According to studies made by Martella et al. (1999a) on the decrease in rhea populations, several factors of different importance may be responsible: hunting; the gathering of eggs for local consumption, of much less importance; followed by predation by armadillos, wolves, cougars and dogs; human settlement; exploitation of petroleum and minerals; and extreme climatic factors. Commenting on data from the livestock survey in Patagonia, Bellati (1992) noted that it is difficult to obtain data on the capture of wild specimens and that, even in cases in which data exists, they are highly unreliable.

Loss of habitat caused by overgrazing through extensive ranching at inadequate loads does not present a problem for the subsistence of rhea populations in Patagonia, owing to the low degree of the overlapping of its diet with that of domestic livestock (Bonino et al. 1986).

In summary, it can be said that potential threats to the Patagonian subspecies are insignificant. On the contrary, at the present time ranching is in a crisis because of the low price of wool on the international market. As a result, many ranches in the Argentine Patagonia have been abandoned or converted to other activities (for example, ecotourism). This has contributed to an even further reduction of the traditionally low division of the habitat in the region and has mitigated the process of desertification.

3. Utilization and Trade

3.1 National utilization

Studies show that as a subsistence resource the rhea is little used by the local inhabitants (Martella et al. 1999a). Only a low proportion of rhea are used locally for meat and skins. Sheep are the main food source for the inhabitants of Patagonia.

The current main utilization of the rhea is small-scale and experimental breeding in captivity to build up breeding stock (see section 4.2.3.1).

3.2 Legal international trade

Legal international trade is mostly from Chile for zoos. Between 1978 and 1987, 25 live specimens were reportedly exported, while between 1987 and 1997 specimens exported rose to 57 (source, WCMC).

3.3 Illegal trade

No data are available on illegal trade in this subspecies.

3.4 Actual or potential trade impacts

The proposed amendment will make it possible to carry out international trade in parts and derivative of *P. p. pennata* from managed operations based on captive breeding under supervision. This system will make it possible to maintain records of operations, to identify and monitor breeding stock and parts and derivatives. At the same time, this will guaranty identification and permanent monitoring of this subspecies, ensuring wise management and, at the same time, guaranty that the other two subspecies remain excluded from trade.

3.5 Captive breeding or artificial propagation for commercial purposes (outside country of origin)

The number of specimens of *P. p. pennata* that might be in captive breeding farms or zoos outside Argentina is unknown. Nonetheless, it is estimated that the number is insignificant; at least in comparison to the *R. americana*, for which many breeding farms are known in the United States and Canada, in addition to several in Spain and Great Britain (Navarro, personal communication).

4. Conservation and Management

4.1 Legal status

4.1.1 National

- Law 22.421 on wildlife conservation and Decreto Reglamentario 666/97

- Law 22.344 on ratification of CITES and Decreto Reglamentario 522/97

Taking into account Argentina's federal political system, each province has, in turn, its own regulations on conservation, wildlife management, captive breeding operations and commercial and sport hunting of wildlife within that province.

Province of Chubut:
- Wildlife law 3257, regulating wildlife at the provincial level
- Decreto Reglamentario 868/90, regulating all activities related to wildlife, including registration and operations of wildlife breeders in the province
- Law on sustainable management of the *P. p. pennata* (now being considered by parliament)
- Disposition 035/99 DFS on the creation of the register of rhea breeders in the province

Province of Neuquén:
- Wildlife law 1034, regulating wildlife at the provincial level
- Decreto 842/78, establishing the functions and responsibilities of the agency responsible for applying this law (the Direction de Recursos Faunísticos)
- Disposition 462/96, regulating operations using wildlife, including breeding operations
- Disposition 313/96, regulating captive breeding operations using *P. p. pennata* in the province

Province of Río Negro:
- Law 2056/85, regulating use of wildlife at the provincial level
- Decreto 1270/94, regulating the captive breeding of wildlife
- Disposition 30/96, regulating the captive breeding of *P. p. pennata*

Province of Santa Cruz:
- Law 2373/94, regulating wildlife at the provincial level
- Resolution 644/95, declaring the *P. p. pennata* a protected species in the province

4.1.2 International

This species is currently listed in Appendix I of CITES.

4.2 Species management

4.2.1 Population monitoring

The programme "Conservación y Manejo del Choique en Patagonia," co-ordinated by the Dirección de Fauna y Flora Silvestres de la Nation (Secretaría de Recursos Naturales y Desarrollo Sustentable) has been carried out since mid-1996 under the supervision of researchers from the Consejo Nacional de Investigaciones Científicas y Técnicas (CONICET/Universidad Nacional de Córdoba). Researchers and staff of these agencies, guest researchers and technicians from the Instituto Nacional de Tecnología Agropecuaria (INTA), the wildlife departments of four Patagonian provinces, associations of producers and provincial and regional development agencies also participate.

This programme began as an initiative of the Direction de Fauna y Flora Silvestres, the CITES Management Authority for Argentina, and the results, conclusions and recommendations serve as a basis for the decisions of this governmental agency, as well as those of the provinces within the range of this species.

In the future, it is planned to carry out periodic monitoring of wild rhea populations in several Patagonian provinces. These will be made every one or two years, depending on the situation, using a methodology similar to that employed in 1998 by the provincial wildlife authorities.

4.2.2 Habitat conservation

Argentina is implementing, through the Secretaría de Recursos Naturales y Desarrollo Sustentable, the Programa de Action Nacional de Lucha contra la Desertification, within the guidelines of the United Nations Convention to Combat Desertification and Mitigation of the Effects of Drought.

The objective of this programme is to carry out actions tending to mitigate the effects of desertification and drought in order to contribute to the success of sustainable development in the affected areas, thus, improving the living conditions of the human population.

The Argentine Patagonia lies between 36° and 55° south latitude and covers an area of 780,000 square kilometres (including the Patagonian steppe and the Andean-Patagonian forests), representing approximately one third of the area of continental Argentina. This

includes six provinces: Chubut, La Pampa, Neuquén, Río Negro, Santa Cruz and Tierra del Fuego. The human population is 1,500,000 persons, giving a population density of 1.9 inhabitants/square kilometre.

The concept of sustainable development is the core of the strategy of the Programa de Action Nacional de Lucha contra la Desertification. Regional workshops have been held in which many of the parties concerned participated in order to achieve a common vision of desertification and to identify possibilities for human intervention.

Using this mechanism, it was decided to implement the following policies:

- Creation of a common legal framework, making possible the legal and social regulation of operations and management of production
- Training of local producers
- Promotion of dialogue with politicians in order to find solutions for this problem
- Training of human resources in the public sector
- Promotion of environmental awareness in the region
- Conception and implementation of a system for monitoring desertification
- Promotion of regional co-ordination
- Establishment of financial mechanisms
- Studies on the environmental impact of future undertakings
- Regulation of land tenure
- Development of wise production technologies

This subspecies is included in the system of national and provincial protected areas in Patagonia. Protected areas cover almost 5 per cent (approximately 20,000 square kilometres) of the rhea's habitat (the Dry Scrub Patagonian Steppe). There are records of rhea populations in Monumento Nacional and Reserva Natural Estricta Bosques Petrificados (100 km^2, Santa Cruz); Reserva Natural Turística de Uso Múltiple Península de Valdés; (3,600 km^2, Chubut); Reserva Provincial Meseta de Somuncurá (16,000 km^2, Río Negro); Parque Nacional and Reserva Natural Estricta Laguna Blanca (113 km^2, Neuquén); Reserva El Tromen (Chubut); Reserva Cabo Vírgenes (Santa Cruz); and Reserva Península de San Julián (Santa Cruz) (Manuel Nores, personal communication; Bertinelli and Chébez (1986).

4.2.3 Management measures

As a precautionary measure during this first stage, Argentina authorized sustainable use of the *P. p. pennata* based on captive breeding. Other forms of use based on acquired experience might be proposed in the future. This proposal will be studied by the competent agencies.

Trade will be limited to only what is produced on the farms. There will be no capture of wild specimens for commercial purposes. Only limited gathering (only eggs) will be authorized from wild populations for use as initial breeding stock for new farms and to introduce genetic variation in existing breeding stock whenever necessary.

4.2.3.1 Captive breeding farms

The most recent information available on the number of active rhea farms and their breeding stock in each Patagonian province is given in table 2.

The first breeding farm to begin operations was the experimental livestock breeding station of the Instituto Nacional de Tecnología Agropecuaria (INTA) in Bariloche (province of Río Negro). Its breeding stock was obtained from incubation of two nests (approximately 60 eggs) gathered in the wild as an experiment in 1993. Almost all of the other farms have formed their breeding stock from specimens from INTA Bariloche or from commercial breeding farms supplied in turn by INTA. These farms are members of the Asociación Patagónica de Criadores de Ñandú and, more recently, the Asociación Neuquina

de Criadores de Ñandú. Only one pilot farm operating in Chubut, through an agreement with the Direction de Fauna of this province, and another in Santa Cruz have begun gathering and raising wild chicks (approximately 60 and 90, respectively). In Chubut, there is an experimental breeding centre, which began operations in August 1996 using wild specimens and that now has second generation specimens. The oldest farms in Río Negro and Neuquén have already produced a third generation of rheas in captivity.

Table 2. Number of farms and total breeding stock of *P. p. pennata* in four Patagonian provinces and totals for the region.

Parameters	Santa Cruz	Chubut	Río Negro	Neuquén	TOTAL
Farms	3	3	8	5	19
Adults	80	30	270	60	440
Juveniles	20	0	100	30	150
Total	100	30	370	90	590

In 1998, specimens from breeding farms were reintroduced to the wild (Bellis et al. 1999b). These experiments were carried out in order to study the survival, range and use of habitat by rheas. At the same time, this experiment will make it possible to determine the success of adaptation to the wild of specimens from captivity and, therefore, the relationship of cost/benefit of possible reintroductions in the future.

Until now, five one-year-old Darwin's rheas have been released, marked with self-adjusting safety collars fitted with transmitters. The animals were obtained by artificial incubation, raised on two farms north of the Río Negro (Choique Malal and Choique Hue) and released on two large private farms. Later, periodic monitoring of these birds was carried out, using a portable receiver. The detected sightings, visually confirmed with binoculars or telescope, or triangulated with a compass, were plotted with a satellite geoplotter and are being transferred to a geographic information system. This will make it possible to draw maps showing the sequence of movements of each rhea. Vegetation maps will also be prepared for incorporation into the same system to establish use preferences for habitats. The information obtained so far about the location and distance from the release site of the specimens ranges from 3 to 29 kilometres. At the end of this year or at the beginning of 2000, it is intended to release a larger number of marked rheas in order to increase available data and, if possible, to carry out aerial monitoring in order to find individuals for which no radio signal is being received.

As for the average production of the farms, Bellis et al. (1999a) and Navarro et al. (1999c) provide data taken periodically on four important farms during two reproductive seasons. The average production recorded in these farms (see tables 3 and 4) is similar to that of most of the rhea breeding farms in the rest of the world. Nonetheless, the efficiency of some of them can be improved as producers incorporate management techniques taking into account current scientific research.

It should be pointed out that captive breeding operations will remain restricted to the area of distribution of this subspecies in order to optimize management and avoid problems derived from accidental release, especially in areas where the other Argentine subspecies live.

Table 3. Comparison of reproductive parameters obtained on several farms in Río Negro studied in 1997.

Parameters	Choique Ruca	Choique Malal	Choique Hue	La Caledonia[1]
Breeding stock	10	20	4	0
Eggs laid	146	282	105	0
Rejected eggs(%)	26	33.5	14.5	40
Hatched eggs (%)	70	51	80	60
Fertility (%)	90.4	74	69	100
Survival (%)	89	68	62	52
Average offspring per female	20.8	18.8	52.5	-

[1] Eggs from other breeders in this province were incubated.

Table 4. Comparison of the reproductive parameters obtained in several farms in Río Negro studied in 1998.

Parametres	Choique Ruca	Choique Malal	Choique Hue	La Caledonia
Breeding birds	9	11	4	3
Eggs laid	146	231	96	50
Eggs hatched (%)	55	73	23	66
Survival (%) as of 20/12/98	51	80	60	80
Survival (%) as of 09/04/99	58	54[a]	55	30
Juveniles as of 08/99	48	0	10	13
Average nest	29.2	28.9	48	25

[a] Until March when they were transferred to Choique Ruca.

In the future, wildlife authorities will be in a position to authorize regulated and limited gathering of eggs from the wild for new operations or for introduction of genetic variation in existing breeding operations. Those making requests must be registered and follow all regulations applicable to breeders in that province and demonstrate full capacity to gather, incubate and properly raise eggs through the application of theoretical concepts and use of proper infrastructure. The gathering of eggs will be monitored by a competent agency from the beginning of the reproductive season and will be limited to a full nest (a maximum of 30 eggs) per breeding operation during that season in cases of renewal of breeding stock.

In the case of new operations, surveys will be made in that area in order to evaluate the number of eggs to be collected.

4.3 Control measures

4.3.1 International trade

The international marketing of products and derivatives of *P. p. pennata* will be based on pertinent regulations covering this subspecies listed in CITES Appendix II and using the additional means of identification and certification described in the next section (4.3.2).

4.3.2 Domestic measures

All specimens from captive breeding operations will be identified with a system of implanted microchips. This identification will be monitored. Businesses and operations must be registered and identification must cover all juveniles produced each year that have survived beyond the risk of early death (after four months of age).

A system of mandatory standardized forms is being prepared for control of production and transfer of breeding stock among the farms. There are three types of these forms, copies of which are included as annex 1.

a) Form for registration of rhea breeding stock. On this form (which will remain with the inspection service) will be written information on the owner and the responsible technician, geographic location, characteristics of buildings and available infrastructure, management and breeding methods, background and volume of bird production.

b) Form for the seasonal monitoring of changes in breeding stock on the rhea farms. This sheet will be filled out by the owner and the employed technician and submitted at least three times per year (season prior to reproduction, mid-reproductive season and post-reproductive season) to the provincial wildlife service. It should contain information on growth (births, eggs and hatching) and reductions (sales, transfers, deaths and destruction of eggs) of breeding stock for the present and the previous breeding periods.

c) Form for monitoring periodic movement of breeding stock. This several-page form will provide information similar to the previous form, but will remain at the farm and should be completed and signed regularly by the acting technician (weekly during the breeding season and monthly out of the breeding season). It should be shown by the owner whenever requested during inspections carried out at the farm.

Data declared by producers can be compared with information on breeding and survival available until then from the experimental rhea farms already functioning. In the event of significant discrepancies in data declared for a farm, steps can be taken to increase intervals of inspection or tighten regulation of that particular operation. This methodology, apart from the detection of fraud, will make the entry of incorrect information difficult and discourage fraud.

Transfer of animals between farms and from farms to processing plants will be communicated to the appropriate provincial wildlife authority on specific official forms. Both processing plants and manufacturers of packaging must keep records of volume and weight of intake or volume of animals/product and weight/volume processed, giving details on products and derivatives.

Packaging or products used for marketing should have clear identification labels giving the product and weight. A serial number and code should be provided for that identifies the country (standard nomenclature), the year and the contents. In the case of bulk skins or meat, packages should be sealed with official seals, indicating the volume in each case.

5. Information on Similar Species

Species of Argentine rheas can be identified by using criteria described by Dabbene (1920) and Blake (1977). Specimens of *R. americana* and *P. p. pennata* can be identified by their tarsi: the first has completely bare tarsi and the outside surface is completely covered with wide transversal scales, while the second has feathered tarsi near the joint, with the tibia and the outside surface covered with scales only in the distal part, being reticulate in the rest. The juveniles of *R. americana* and *P. p. pennata* can also be identified by the special characteristics of their voices (Martella et al. 1999b).

As for their general appearance, the most important distinguishing marks are that the *R. americana* is larger than the *P. p. pennata.* Its bill is longer and its back is a uniform greyish colour, while the feathers of the *P. p. pennata* have white spots (Narosky and Yzurieta 1993).

The recently laid eggs of both species can be identified by colour; golden yellow in the case of the *R. americana* and dark green in the case of the *P. p.* ssp., but these colours fade with time.

The *R. pennata* ssp. has characteristics that make it possible to identify the subspecies: *P. p. pennata* has greyish feathers with abundant feathers with white edges and between 16 and 18

transversal scales on the tarsus; *R. p. garleppi*, on the other hand, is characterized by greyish brown feathers, with a few feathers with a white edge and only 8 to 10 transversal scales on the tarsus.

There are breeding farms of the common rhea (*R. americana*) in Argentina. Trade in wild specimens of this species or parts and derivatives is prohibited. Trade in products from captive breeding operations or farms with this species will be authorized in the near future. Meanwhile, steps are being taken to differentiate products of this species from those of *P. p. pennata*. This is of special importance for the identification of the origin of the meat at the beginning of processing.

6. Other Comments

The other range State that shares distribution of *P. p. pennata*, Chile, was consulted and their comments are attached as annex 2.

7. Additional Remarks

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8. References

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PLANILLA PARA LA INSCRIPCIÓN O RELEVAMIENTO INICIAL DE GRANJAS DE RATITES

GRANJA: **Propietario:** **Código de Ident.:**

Ubicación (Prov.; Local.cercana; Coordenadas(op.), Catastral (op.):

Fecha de inscripción en Fauna: Provincial: Nacional:

Profesional responsable: Título: Matrícula:

Otras Actividades del Establecimiento:

Infraestructura disponible

Electricidad ☐ Agua: Corriente - De Red - De Pozo Potable ☐ P/Ganado ☐

Alambrado ☐ Bebedero ☐ Comedero ☐ Refugio ☐ Tinglado cría ☐

Altura Tipo/s: Tipo/s: Tipo/s: Tipo/s:

Tipo No. No. No. No.

Boyero Eléctrico ☐ Perímetro o área c/ boyero:

CANTIDAD, DIMENSION Y DIPOSICION DE CORRALES:

Características del predio

Barroso ☐ Pendiente: Alta ☐ Drenaje: Bueno ☐ Pastura ☐

Arenoso ☐ Moderada ☐ Regular ☐ Tipo/s

Pedregoso ☐ Llana ☐ Malo ☐

Arcilloso ☐

Otros:

Presencia de animales domésticos

Ganado ☐ Aves ☐ Cánidos ☐ Félidos ☐

Tipo/s: Tipo/s: Tipo/s: Tipo/s:

Cant. Aprox.: Cant. Aprox.: Cant. Aprox.: Cant. Aprox.:

Cuáles contactan c/ ratites ?

Plantel Inicial de la granja

No. de: Machos: Subadultos:

Hembras: Pichones:

Procedencia del plantel inicial: Fecha de inicio de la actividad:

Plantel Actual de la granja:

No. de: Adultos: Subadultos: Pichones:

No. de individuos en edad reproductiva: Machos: Hembras:

Edad de los individuos reproductores al inicio de la temporada:

No. de reproductores en uso: Machos: Hembras:

Conformación de grupos reproductivos (Machos / Hembras):

Sistema de identificación: Microchip ☐ Lector ☐

Collares ☐ Pulseras ☐ Marca/s:

Tipo/s: Tipo/s:

Alimento	Pichones			Adultos	
	1° etapa	2° etapa	3° etapa	Mantenimiento	Reproducción
Tipo/s					
Marca/s					
Frecuencia/s					
Cant. Total / día					
Cant. total / animal					
Suplemento/s					
Observaciones					

Almacenamiento ☐	**Incubadora/s** ☐ No.:	**Nacedora/s** ☐ No.:
Temp. Sala:	Tipo:	Tipo:
Tiempo Prom:	Capacidad:	Capacidad:
	Temp.Sala: Temp.Máquina:	Temp.Sala: : Temp.Máquina:
Higiene:MB -B -R	Higiene:MB -B -R Higiene:MB -B -R	Higiene: MB -B -R Higiene: MB -B -R

Desinfectante utilizado:

Observac.:

Balanza **Huevos** ☐	**Pichones** ☐			**Ovoscopio** ☐
Tipo:	Tipo:			Frecuencia:
Precisión:	Precisión:			
Frecuencia:	Frecuencia:	Hasta:		Observ.:

Cría de Pichones

Metodología, Infraestructura y Espacio Disponible

Salas Especiales ☐ Desde: Hasta: Dimensión corral:

Separa p/Tamaño ☐ Dimensión corral: Tipo de separación:

Separa p/ Edad ☐ Tipo de superficie:

Acceso Corral Externo ☐ Dimensión corral: Desnudo ☐

Tipo de separación: Pastura ☐ Tipo/s:

Tipo de superficie:

Cría a la Intemperie ☐ Desde: Hasta: Tipo de separación:

Tipo de superficie:

Cría Por Adopción ☐ Observac.:

Cría Natural ☐ Observac.: Refugio ☐ Observac.:

Boyero Eléctrico ☐ Perímetro o área c/ boyero:

Bebederos ☐ Comederos ☐

No. y Tipo/s: No. y Tipo/s:

Medicación utilizada:

Sistema de identificación: Microchip ☐ Lector ☐

Collares ☐ Pulseras ☐ Marca/s:

Tipo/s: Tipo/s:

INDICES PRODUCTIVOS DE TEMPORADAS PREVIAS

TEMPORADA	__/__	__/__	__/__	__/__	
Total Huevos Puestos:					
Total Huevos Fértiles:					
Total Huevos Infértiles:					
Total Huevos Descartados:					
Causas principales de descarte:					
Total Huevos Eclosionados:					
Total Pichones Vivos Marzo-Abril:					
Total Juveniles en Agosto/Setiem:					
Causas principales de Muerte: Pichones:					
Juveniles:					
Adultos:					

OBSERVACIONES

RELEVO - Apellido y Nombre: Firma:

Fecha: / /

Visto del responsable del establecimiento: Firma:

Aclaración:

Recomendaciones de Manejo (fecha)	Resultados Obtenidos (fecha)

PLANILLA PARA FISCALIZACION ESTACIONAL
DE MOVIMIENTOS DEL PLANTEL DE GRANJAS DE RATITES

GRANJA: ***AÑO/S:***

CODIGO de identificación:

			DECLARACION ANTERIOR	DECLARACION ACTUAL
	PERIODO COMPRENDIDO			
SUBADULTOS MACHOS	ALTA POR INGRESOS			
	BAJAS	VENTAS		
		CESIONES		
		MUERTES		
HEMBRAS	ALTA POR INGRESOS			
	BAJAS	VENTAS		
		CESIONES		
		MUERTES		
SUBADULTOS	ALTA POR INGRESOS			
	BAJAS	VENTAS		
		CESIONES		
		MUERTES		
TOTAL ACTUAL				
POLLONES	ALTAS	INGRESOS		
		NACIMIENTOS		
	BAJAS	VENTAS		
		CESIONES		
		MUERTES		
	TOTAL ACTUAL			
HUEVOS	ALTAS	INGRESOS		
		OVIPOSICION		
	BAJAS	DESCARTE: INFERTILES		
		DESCARTE: DETENIDOS		
		DESCARTE: CONTAMINADOS		
		VENTAS		
		CESIONES		
	TOTAL ACTUAL			

LUGAR:

FECHA: / /

Firma y Sello del Profesional Responsable:

.....

PLANILLA PARA FISCALIZACION DE MOVIMIENTOS PERIODICOS DEL PLANTEL EN GRANJAS DE CRIA DE RATITES

***FOLIO* No. .....**

GRANJA: ***CODIGO de Identificación:*** ***AÑO/S:*** **/**

	MACHO			HEMBRA			SUBADULTO			TOTAL	POLLOS					HUEVOS							
	ALTA	BAJAS		ALTA	BAJAS		ALTA	BAJAS		ACTUAL	ALTAS		BAJAS		TOTAL	ALTAS		BAJAS				TOTAL	Profesional
	INGR	VENTA/ CESION	MORT	INGR	VENTA/ CESION	MORT	INGR	VENTA/ CESION	MORT		INGR	NAC	VENTA/ CESION	MORT	ACTUAL	INGR	OVIP	DESCARTADO			VENTA/ CESION	ACTUAL	Responsable
FECHA																		INF	DET	CONT			Firma y Sello
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SAG
Fauna N° 310

MINISTERIO DE AGRICULTURA
SERVICIO AGRÍCOLA Y GANADERO
Dirección Nacional

0203

Santiago, - 4 NOV 1999

Señora
Victoria Lichtschein
Directora de Fauna y Flora Silvestres
Secretaría de Recursos Naturales y Desarrollo Sustentable
San Martín 459
(1004) Buenos Aires
Argentina

Estimada Sra. Lichtschein:

Junto con saludarle, tengo el agrado de ratificar, mediante esta carta, el interés de nuestro país en participar y apoyar la propuesta de enmienda a los Apéndices de la Convención sobre el Comercio Internacional de Especies Amenazadas de Fauna y Flora Silvestres (CITES), en cuanto a transferir del Apéndice I al II las poblaciones argentina y chilena de *Pterocnemia pennata pennata*, de acuerdo con las medidas cautelares del Anexo 4, B.2.b), de la Resolución Conf. 9.24. Consideramos que la propuesta realizada por su institución es completa y muy bien estructurada. Asimismo, debido al reciente auge en el desarrollo de establecimientos de cría de la especie en nuestros países, resulta recomendable establecer los mecanismos necesarios para facilitar la exportación de productos y subproductos de *Pterocnemia pennata pennata* procedentes de establecimientos debidamente inscritos en los organismos gubernamentales encargados de estas materias.

En la actualidad, Chile cuenta con 20 establecimientos que poseen ejemplares de *Pterocnemia pennata pennata* en cautiverio. Algunos de estos establecimientos de cría sólo poseen unos pocos ejemplares, siendo los centros con un número mayor de individuos los localizados en la Región Metropolitana (120) y la XII Región (320). Según nuestros registros de declaraciones semestrales, actualmente Chile contaría con una población en cautiverio de *Pterocnemia pennata pennata* de unos 600 ejemplares.

En espera de sus noticias, se despide atentamente,

SERVICIO AGRÍCOLA Y GANADERO
DIRECTOR NACIONAL

ANTONIO PARISI SOULE
DIRECTOR NACIONAL
SERVICIO AGRÍCOLA Y GANADERO

JCCR/AJW
cc. Direcciones Regionales SAG Regiones XII y Metropolitana.
DEPROREN
Of. de Partes.