

Registration Form and Contact Details

Please fill in the details below and send the completed document, as appropriate, to the Chairman of the Animals Committee or the Chairman of the Plants Committee.

Name(s) and affiliation(s) of reviewer(s):

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Taxon reviewed (including common and taxonomic names):

Rhacodactylus leachianus (Cuvier, 1829) ; Leach's Giant Gecko

Please return your completed paper or electronic document to one of the below:

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Table 1 – Comments from reviewer on applicability of criteria for listing on Appendix I

<p style="text-align: center;">CRITERON</p> <p>For your information for a species to fulfill the draft criteria for Appendix I it must meet the trade criteria and at least one of the criteria A-D.</p>	<p style="text-align: center;">NOTES</p> <p>Whenever appropriate, indicate ways in which this criterion and definitions, explanations and guidelines could be improved and/or quantified to better suit this taxon and its relatives (If you need additional space, please use a separate sheet of paper).</p> <p>For the following specific questions, if a point estimate is not available, please provide a likely range of values (e.g., “about 6,000 – 10,000 individuals”) or some kind of rough estimate or inference (e.g., “likely to be less than 500 square kilometres”). Please try to make a numerical guess or give a verbal description and only use DNW (Do Not Know) if there is truly no information available on the quantity in question.</p>
<p>Trade Criterion Is or may the <u>species</u> be <u>affected by trade</u>?</p>	<p>Yes, this species is affected by trade as can be seen on catalogues of many reptile dealers around the world, including many internet opportunities to buy this gecko. I suggest to use at a wider scale among the criteria the fact that a species is easily available through internet since this way of obtaining a species is widespread today. One question that we could ask is : how many answers do you obtain on internet with GOOGLE when using the name of the species ? Is this number growing through the (months) years ? This is a very easily obtained information and can be useful in giving quantitative data on commercial use of a species. Also we can ask the proportion of GOOGLE answers which concern commercial use of the species. Concerning <i>Rhacodactylus</i>, I have this information for several years and there are considerable changes, an increase was particularly clear at the time of the Parties Conference when the species was officially proposed as a candidate for annex II of CITES ...</p>
<p>A) The <u>wild population is small</u>, and is characterized by at least one of the following (see definitions below):</p>	<p>What was/is the estimated size of the <u>population</u>? Please include units of measurement. DNK. It is not possible to give an estimation size since this species has a particular biology, living mostly in the humid forest canopy. Anyway it is present on the whole main island (excluding the drier parts of western mainland), including several surrounding islands.</p>
<p>A)(i) an observed, inferred or projected <u>decline</u> in the number of individuals or the area and quality of habitat; or</p>	<p>There is a decline of the number of individuals due to several factors (habitat destruction for agriculture, grazing, urbanization, predators, ants introduction, ...) but this decline is not severe since adoption of species and habitat protection laws. Anyway care has to be taken. I think threats on population densities (decreasing)</p>

	concern nowadays nearly most of the populations of wild animals and plants outside protected areas. See my comment at B(iv) about the definition of quality of an habitat.
A)(ii) each sub-population being very small ; or	What were/are the estimated sizes of the subpopulation (s)? Please include units of measurement. Range seems relatively continuous for our gecko if habitat availability can permit it. Except the island populations which can be considered as subpopulations, there are no other subpopulations. Apparent fragmentation on mainland more likely reflects the absence of prospections on some areas. Rather than subpopulation I would suggest the use of fragmented populations thus giving what we call a metapopulation.
A)(iii) a majority of individuals, during one or more life-history phases, being concentrated in one sub-population ; or	Not the case there but this criteria may be useful during sea turtles egg-laying phases eg.
A)(iv) large short-term fluctuations in the number of individuals appropriate to measuring population size for the species concerned;	If the population was/is characterized by large short-term fluctuations in the numbers of individuals, what was/is the average magnitude in orders of magnitude? What was/is the average period of fluctuation in years? Not the case for our species.
A)(v) a high vulnerability due to the species' biology or behaviour (including migration).	Not the case for our species.
B) The wild population has a restricted area of distribution and is characterized by at least one of the following (see definitions below):	What was/is the estimated area of distribution ? If listing on the basis of one or more sub-populations , what were/are the estimated areas of distribution of the subpopulation(s)? Please include units of measurement? There we have to take care since most endemic island species have a restricted distribution but however this distribution is their natural distribution and they still can be abundant. Perhaps we have there to precise “unnaturally restricted” but in this case species with range restrictions due to eg volcanic activities or hurricanes are still concerned.
B)(i) fragmentation or occurrence at very few locations; or	There we have to take care that this does not recover the notion of sub-population of Aii. Fragmentation means of course existence of subpopulations. This is not the case for our gecko. Some island species have naturally fragmented distributions and their

	densities can still be high (not threatened) even if they fit criteria B and Bi and if they are naturally fragmented.
B)(ii) large fluctuations in the area of distribution or the number of sub-populations ; or	This is not really clear to me. Does it mean fluctuations in the time or that the geographically location of the subpopulations are changing during the time ?
B)(iii) a high vulnerability due to the species' biology or behaviour (including migration); or	This criteria could eventually be applied in my case since the big size of that gecko (the biggest living species of that family) can explain its vulnerability since such a size attract the pet keepers and thus is at the origin of legal and illegal commercial use of the species. But does “biology” include size, shape or attractive coloration of a species or parental care which also attract some pet keeper ? In this criteria do you mean naturally vulnerability (through predation) or/and vulnerability through commercial use by man ?
B)(iv) an observed, inferred or projected decrease in any one of the following:	
<ul style="list-style-type: none"> • The area of distribution; or 	In my case, like in most cases, natural habitat of that gecko is threatened so for sure there will be an habitat restriction in the coming years. This will however now be true for most species not included in protected areas since human pressure is more and more strong (urbanization, introductions, parasites, ...).
<ul style="list-style-type: none"> • The area of habitat; or 	Yes, I think there could be a decrease of the area of distribution WITHOUT a decrease of habitat distribution (diseases, introduced predator, ...). In the case of our gecko some introduced predators like cats or ants could reduce distribution area without having an impact on habitat.
<ul style="list-style-type: none"> • The number of sub-populations; or 	This means that some of the fragmented populations will become extinct. Another way to formulate this criteria is “Will all or most of the fragmented populations survive in the coming years” or “Are there threats on some of the fragmented populations” ?
<ul style="list-style-type: none"> • The number of individuals; or 	Not possible to have this information in the case of our gecko.
<ul style="list-style-type: none"> • The quality of habitat; or 	There should perhaps be a precision. For some species they can sometimes only live on one tree species located in a particular kind of forest. What will we consider as the habitat of that species : this kind of forest or only the species of tree on which

	the species will live ?
<ul style="list-style-type: none"> The recruitment. 	
<p>C) A marked decline in population size in the wild, which has been either (see definitions below):</p>	<p>Historical extent of decline - To what extent has the population or the area of distribution (please specify which) declined since historical times (i.e., going back 100 years or more if known; else based on whatever information is available)? (Ex. The ___ has declined down to ___% of the historical levels of ___ years ago.)</p>
	<p>Recent rate of decline - Characterize the recent (10-20 year) trends in population size or area of distribution (please specify which).</p>
<p>C)(i) observed as ongoing or as having occurred in the past (but with a potential to resume); or</p>	<p>I suggest to precise there what you mean by “past” since some species could have suffered in the past from natural forest fires or volcanic natural activities, hurricanes ... Some past population decreasing (contemporary to human colonization on some island) like on several Pacific islands have not to be considered there.</p>
<p>C)(ii) inferred or projected on the basis of any one of the following:</p>	
<ul style="list-style-type: none"> a decrease in area of habitat; or 	
<ul style="list-style-type: none"> a decrease in quality of habitat; or 	
<ul style="list-style-type: none"> levels or pattern of exploitation; or 	
<ul style="list-style-type: none"> threats from extrinsic human-induced factors such as competition/predation by introduced species or the 	<p>In that case I suggest to introduce the GLOBAL WARMING since this change is a human-induced factor which can considerably change the distribution area of some species. Island littoral endemic species will strongly suffer from sea level changes</p>

effects of hybridization, toxins and pollutants; or	and they will sometimes not find a suitable habitat above the sea shores and thus be more and more threatened. The same is true for coral species which can suffer from higher temperatures in the sea.
<ul style="list-style-type: none"> • a decreasing recruitment 	
D) If not included in Appendix I, is likely to satisfy one or more of criteria A-C within 5 years?	In our case there will be no further threats making that gecko satisfy. I think this time of 5 years is a good choice and should be indicative for many species.

For criteria **A)(v)** and **B)(iii)**, please check which if any of the vulnerability factors listed below apply:

- | | | |
|---|---|---|
| <input type="checkbox"/> ? low fecundity | <input type="checkbox"/> specialized niche requirements (e.g. diet and habitat) | <input type="checkbox"/> threats from disease |
| <input type="checkbox"/> slow growth rate | <input type="checkbox"/> species associations such as symbiosis and other forms of co-dependency | <input checked="" type="checkbox"/> YES threats from invasive species |
| <input checked="" type="checkbox"/> YES high age at first maturity | <input checked="" type="checkbox"/> YES fragmentation and habitat loss | <input type="checkbox"/> threats from rapid environmental change (e.g. climate regime shifts) |
| <input type="checkbox"/> distorted age, size or sex ratio | <input type="checkbox"/> reduced genetic diversity | <input type="checkbox"/> selectivity of removals (that may compromise recruitment) |
| <input type="checkbox"/> complex social structure | <input type="checkbox"/> depensation (prone to continuing decline, even in the absence of exploitation) | <input type="checkbox"/> Other (please specify) |
| <input type="checkbox"/> extensive migratory behaviour | <input type="checkbox"/> high degree of endemism | |
| <input type="checkbox"/> strong aggregating behaviour (e.g., schooling) | | |
| <input type="checkbox"/> low population density (for sessile or semi-sessile species) | | |

Table 2 – Comments from reviewer on applicability of criteria for listing on Appendix II

<p style="text-align: center;">Criterion</p> <p>For your information for a species to fulfill the draft criteria for Appendix II it must meet at least one of the criteria A-D.</p>	<p style="text-align: center;">NOTES</p> <p>Whenever appropriate, indicate ways in which this criterion and definitions, explanations and guidelines could be improved and/or quantified to better suit this taxon and its relatives (If you need additional space, please use a separate sheet of paper).</p>
<p>Trade Criterion Is or may the <u>species</u> be <u>affected by trade</u>?</p>	<p>I suggest to precise the actual extend of the trade : eg widespread in the country only, neighbor countries, the continent or in the whole world. One other important data to me is to give the price of a specimen (eg 1 adult male of <i>Rhacodactylus leachianus</i>) or an animal product (eg 1 kg coral sand) in the country of origin (eg compared to the money earned by a farmer one month) so we can have an idea of the local interest and pressure in collecting this species ; this is REALLY an important data for the pressure on an animal species. Another important point is to give the price in the importing country and thus also can give a good idea of the collect pressure that importing countries create in the origin countries. I think that quantitative data (the price) are absolutely necessary in that criteria : “money makes the world go round”.</p>
<p>A) It is known, or can be inferred, that the regulation of trade in the species is necessary to avoid it becoming eligible for inclusion in Appendix I in the near future.</p>	<p>See my remarks above. Yes in our case. The price of that giant gecko is relatively high and may attract some people to develop its commercial use (legal or illegal). This species also is difficult to breed in captivity and thus natural takings are still to be strongly under control according to local and international regulations.</p>
<p>B) It is known, or can be inferred or projected, that harvesting of specimens from the wild for international trade has, or may have, a detrimental impact on the species by either:</p>	<p>Yes in our case. This species is the biggest living gecko and is very attractive for pet keepers.</p>
<p>B)(i) Exceeding, over an extended period, the level that can be continued to perpetuity.</p>	<p>This is particularly true for the most isolated island populations. Those are more easy to collect since vegetation is lower on those small islands and most of the collects are made on such places. On the main island the species lives in higher trees much less accessible to collectors.</p>

<p>B)(ii) Reducing it to a population level at which its survival would be threatened by other influences.</p>	<p>Yes. Introduced predators and ants, but also fires and habitat destruction.</p>
<p>C) The specimens of the species in the form in which they are traded resemble specimens of a species included in Appendix II under the provisions of Article II, paragraph 2(a), or in Appendix I, such that a non-expert, with reasonable effort, is unlikely to be able to distinguish between them.</p>	<p>In our case juveniles of all species included in the genus <i>Rhacodactylus</i> can be distinguished but not really easily. Anyway most species are now well breed in captivity and most of the specimens commercially proposed are breed in captivity. Other species threatened in the genus are <i>R. trachyrhynchus</i> and <i>R. chahoua</i>. It depends in that criteria of what we call “a reasonable effort” and if experts can make useful keys which allows a clear specific determination. Also important is the availability of such keys for the control authorities ...</p>
<p>D) There are compelling reasons, other than those given in C to ensure that effective control of trade in currently listed species is achieved.</p>	<p>Local legislation is nowadays not available in whole New Caledonia. Politically New Caledonia is separated in three autonomous provinces, Province Sud, Province Nord and Province des îles (not concerned by <i>Rhacodactylus</i> species). Only Province nord has actually a legislation protecting those geckos and this legislation is still under negotiations in province sud.</p>

For criteria A) and B), please check which if any of the vulnerability factors listed below apply:

- +/- low fecundity
- +/- slow growth rate
- +/- high age at first maturity
- distorted age, size or sex ratio
- complex social structure
- extensive migratory behaviour
- strong aggregating behaviour (e.g., schooling)
- low population density (for sessile or semi-sessile species)
- specialized niche requirements (e.g. diet and habitat)
- species associations such as symbiosis and other forms of co-dependency
- + fragmentation and habitat loss
- reduced genetic diversity
- depensation (prone to continuing decline, even in the absence of exploitation)
- + high degree of endemism
- threats from disease
- + threats from invasive species
- threats from rapid environmental change (e.g. climate regime shifts)
- selectivity of removals (that may compromise recruitment)
- Other (please specify)