AMENDMENTS TO APPENDICES I AND II OF THE CONVENTION

Other Proposals

A. PROPOSAL

Inclusion of Varanus grayi in Appendix I.

B. PROPONENT

The Federal Republic of Germany.

C. SUPPORTING STATEMENT

1. Taxonomy

11. Class: Reptilia

12. Order: Sauria

13. Family: Varanidae

14. Species: Varanus grayi (Boulenger, 1885)

15. Common Names:

English:	Grays monitor lizard
French:	varan de Gray
Spanish:	Varano de Gray
German:	Grays-Waran
Italian:	varano di Gray
Local:	butaan, batua, baneas

16. Code Numbers: A-303.016.001.014

2. Biological Data

21. Distribution: Varanus grayi is apparently only restricted to the islands of Catanduanes and Luzon, Philippines. It is found over about 15% of the land surface of Catanduanes but a smaller part of Luzon (see also Annex 1).

Catanduanes: Varanus grayi occurs in some numbers probably throughout all the remaining forested areas of Catanduanes.

Luzon

- Province Albay: Remaining forested areas in which Varanus grayi is found tend to be restricted to the North-East part of the province. The species will possibly be found on the mountains of Rapu Rapu Island.

- Province Sorsogon: Three small localities.

- Province Camarines Sur: A large population is found along the northern province boundary, a small along the western coast and two populations are completely isolated in the eastern part of the province. Some specimens may occur on Quinalasag Island.

- Province Camarines Norte: Varanus grayi is known to occur in the extreme South-East and in the northern and southern parts of the mountainous regions. No islands of the province are known to have specimens.

- Province Quezon: Little is known regarding the distribution of Varanus grayi in the large province. There is no reason to believe that it is missing from any part of this vast area wherever the forest has not been completely cleared. At present there is no evidence that the species occurs on any of the Polillo Island group.

- Province Laguna: Varanus grayi is known to occur in the western slopes of the Sierra Madre Mountains.

- Province Rizal: The species is expected to be found all along the western slope of the Sierra Madre to the northern boundary of the province.

- Province Bulacan: No specimens known from this province but expected to occur in the estearn third of the province.

- Province Nueva Ecija: No specimens have been found but probably the extreme eastern edge of the province contains good populations.

- Province Aurora: No specimens are yet known but are expected in the extreme southern trip of the province along the Quezon boundary.

- Other provinces: Varanus grayi is not expected to occur.

(Ref.: Auffenberg, 1988)

Formerly Varanus grayi was considered to be one of the rarest lizards in the world. According to Auffenberg it is one of the worlds rarest species of larger lizards but is more widely distributed than previously documented.

The total known range is approximately 5,000 sq.km, only seven times larger that the knowm range of Varanus komodoensis - considered as the most endangered of all species of monitors. The range as presently understood is in fact so small that, next to the Komodo monitor, it is probably the second smallest for any monitor species (Auffenberg, 1988).

22. Population:

Cantanduanes: Varanus grayi is said to be common on the East coast.

Luzon:

- Province Albay: Some small populations still remain in the lower slopes of the North-eastern part of the province. The North-North-western part of the province contains good populations. There may be a small population in the extreme South-East.

- Province Sorsogon: Varanus grayi has been found in three small localities.

- Province Camarines Sur: A large population exists along the northern province boundary. Small numbers occur along the western coast and in the eastern part.

- Province Camarines Norte: Several large populations.

- Province Quezon: Little is known. The habitat on the eastern slopes of the Sierra Madre Mountains harbors the largest remaining population within any province.

- Province Laguna: The original population has been reduced but still exists in probably small numbers.

- Province Rizal: Varanus grayi is known to occur but the extent of the population is unknown.

- Province Bulacon: No specimen known from this province.

- Province Nueva Ecija: No specimens have been found.

- Province Aurora: No specimens are yet known.

- Other provinces: The species is not expected to occur.

(Ref.: Auffenberg, 1988)

Within historic time the species was probably common near sea level in the then widely distributed appropriate forest habitats. This is no longer the pattern because the existing populations are now largely relictual (Auffenberg, 1978).

But within its small range the species is actually common and is in no danger of imminent extirpation (Auffenberg, 1988).

However, population densities are clearly low even in undisturbed areas and it is rarely seen (Auffenberg, 1978).

23. Habitat: Tropical evergreen forests in hilly to mountainous country. Varanus grayi is restricted to montainous regions below 750 m above sea level. The principal habitats of the species are dipterocarp (thought to be the climatic vegetational climax throughout most of South-East Asia) and secondary forests. The species is arboreal and seldom seen on the forest floor. Within the known range of this species, average annual rainfall is about 3,000 mm (Auffenberg, 1988).

Varanus grayi is the only regularly frugivorous monitor species in the world. It feeds also on molluscs, snails end eggs (Auffenberg, 1976).

Catanduanes: This island has, perhaps, one of the largest forest blocks remaining in the Bicol area, where Varanus grayi occurs in some numbers.

Luzon:

- Province Albay: Much of the province has been converted to agriculture. Some forests remain in the North-East. The forest of the islands of the province were destroyed long ago. The Rapu Rapu Island is the only island where the species is expected to occur.

- Province Sorsogon: The small province of Sorsogon has been largely converted to agriculture.

- Province Camarines Sur: Much of the province has been converted to agriculture, dividing the once extensively distributed Varanus grayi into at least four populations. Many islands in the province are too small to support viable populations. All of the Lucsuhin Islands, including Lahoy Island, are completely deforested and have no specimens. Butauanan Island has been extensively modified and has lost all specimens for which it evidently was named (local Varanus grayi = butaan). Quinalasag Island is still partly forested and some specimens are expected to occur.

- Province Camarines Norte: The remaining populations have only recently been separated into a northern and southern portion by the agricultural development that accompanied the construction of the National Highway No. 1, which bisects the province.

- Province Quezon: Land use in the West of the province is highly agricultural. Alibijabon Island and Alabat Island are completely cut over and no specimens are expected there.

- Province Laguna: Most of the province has been converted to agriculture. This fact, plus the generally high human population density, has apparently been responsible for a major reduction of the original population.

- Province Rizal: The human population density is high in the western half of the province but much of the eastern part is heavily forested.

- Province Bulacan: The western half of the province is agricultural and has a high density of human population. Varanus grayi is expected to occur in the forested eastern third of the province.

- Province Nueva Ecija: Suitable habitat for the species is only available in the extreme eastern part of the province.

- Province Aurora: No specimens are yet known.

- Other provinces: The species is not expected to occur.

(Ref.: Auffenberg, 1988)

The rapidly expanding human population on the Philippines and the increasing demand for natural resources by industrialized and industrializing nations are the ultimate detrimental factors responsible for the destruction of the natural habitat.

These facts have led to a reduction of 65% of the suitable habitat (Auffenberg, 1988).

Unless greater supplies of fuel wood become available to rural Filipinos, much of the remaining lowland primary and secondary forest in which the species is found in southern Luzon will be almost completely gone by the year 2000 (Auffenberg, 1988).

The fact that Varanus grayi feeds on a remarkably small number of fruiting trees and primarily one species of land snail in at least the Caramoan area suggests that the remaining populations are vulnerable to extirpation. Burning and cutting destroys not only seedlings and mature fruit trees but the habitat of the snails as well (Auffenberg, 1988).

3. Trade Data

31. National Utilization: Rural Caramoans eat Varanus grayi for several reasons: it is available meat in a generally protein-starved region, it provides fat for frying and folk medicines of several types, and it is a somewhat prestigious "palutan" (finger food) to be eaten at mens drinking parties.

While the sale of all wildlife meat (in any form) is specifically forbiden by law in the Philippines, the practice is nevertheless common within all forested areas in which the species occurs. Hunting with dogs is not specifically discouraged at the local level, and is regularly used to scavenge whatever meat can be obtained.

Unlike subsistence hunting, commercial exploitation of the species is economically profitable because those who eventually buy it pay a higher price than they would for domestic animal meats. The edible portion of a Varanus grayi is about 11%. At a selling price of about 30 pesos, locally the meat would thus cost about 120 pesos/kg (local pork = 13 pesos/kg).

However, it is not only the food value or taste of the species that encourages its continued capture and sale. Some ethnic and social groups in the Philippines are sometimes more interested in eating wild than domestic meat. Some groups have exploited reptiles as food despite obviously rising costs as the species become more difficult to obtain.

Besides liking the taste (the species is often described by aficionados as "more delicious than chicken"), some think of Varanus grayi as possessing certain medicinal properties. The flesh of monitors is said to "give strength" to the body, to provide "heat". The fat of the species particularly is preferred as a cooking oil, for it does not burn when heated to high temperatures. It is also thought by many to cure skin infections. The gallbladder is often given to sick children having fever and convulsions or chills from several causes. The body fat is sometimes used as a skin balm for babies (Auffenberg, 1988).

Auffenberg would place the monthly harvest of the species throughout the known range at about 20 adults per month, about 240 per year.

The commercial value of the species results from its palatable meat, very much appreciated by the local population, and its skin which is tanned for production of belts, bags, shoes and other leather items. Some specimens are stuffed and sold as curios to collectors (Sison in lit., 1988).

According to Auffenberg (1988) the species is rarely caught in the traps used by commercial hide hunters. He found that skins of Varanus grayi accounted for 0.5% of all monitor skins being processed in the large dying vats in Manila.

32. Legal International Trade:

Imports:

Austria	1985:	5 live Philippines
Federal Republic of Germany	1985:	2 live Austria (Philippines)
United States of America	1983:	5 live Philippines 1 specimen Philippines

Exports:

Austria	1985	5 live F.R.Germany (Philippines)
Philippines	1983	5 live USA, 1 body USA

(Ref.: WTMU Trade Data)

(Philippines) = Country of origin

In 1987 a private foreing individual shipped some specimens to the Middle East allegedly with permit from the Philippine Parks and Wildlife Office of the Bureau of Forest Development (Sison in lit., 1988).

In 1987 a few specimens arrived in the USA for the zoo trade (supposedly 13 individuals), but they became scattered in the hands of a few zoos and individuals (Auffenberg in lit., 1988).

33. Illegal Trade: In 1985 two specimens were imported from Austria into the Federal Republic of Germany and confiscated.

34. Potential Trade Threats: There is some trade in live specimens.

The skin of Varanus grayi is tanned for production of belts, bags, shoes and purses. Some specimens were stuffed and sold as collector items (Sison in lit., 1988).

The range of this endemic species is small and population densities are clearly low even in undisturbed areas (Auffenberg, 1978). So some trade in live specimens and products of Varanus grayi may cause additional threat to the species although the destruction of its habitat is the main threat.

4. Protection Status

41. National: In the Philippines, collection is allowed only for scientific studies. The species along with other varanids is prohibited for collection and export since 1985 (Alvarez in lit., 1988).

42. International: Varanus grayi is included in Apendix II of CITES since the Washington Conference.

43. Additional Protection Needs: The small range, constant pursuit by hunters, and an alarmingly fast rate of destruction of its habitat dictates a vigilant and aggressive policy of protection for the next several decades (Auffenberg, 1988).

Varanus grayi apparently can survive and reproduce even in disturbed forested situations. Its foods are not completely restricted to primary evergreen forests. Even if all the lowland evergreen forests within its range were disturbed (not destroyed), it could survive if not regularly hunted by humans and their dogs (Auffenberg, 1988).

5. Information on Similar Species

Synonyms: Uaranus ornatus, Varanus ornatus, Varanus olivaceus.

Varanus grayi may be mistaken for Varanus bengalensis, which is already included in Appendix I of CITES.

Varanus bengalensis occurs in South and South-East Asia and can be distinguished from Varanus grayi by its yellow lower side. The lower side of Varanus grayi is uniformly grey.

6. Comments from Countries of Origin

Philippines: The herpetology section of the Pambansang Museo (National Museum) in Manila supports the proposal (Sison in lit., 1988). The Protected Areas and Wildlife Bureau, Departement of Environment and Natural Resources, Republic of the Philippines recommends for the species to remain in Appendix II (Alvarez in lit., 1988).

7. Additional Remarks

According to Auffenberg Varanus grayi is not being bred in any zoos. A few are, however, kept in zoos. For example Dallas (Texas) Zoo and New York Zoological Society (Bronx Zoo) in the USA (Auffenberg in lit., 1988).

8. References

Alvarez, J.B.Jr. (Director Protected Areas and Wildlife Bureau, Departement of Environment and Natural Resources, Republic of the Philippines) in lit. to L. Klös, 15 November 1988.

Auffenberg, W., 1976. First Description of an Adult Varanus grayi. Copeia, No. 3: 586-588.

Auffenberg, W., 1978. Grays Monitor Lizard - Status survey. World Wildlife Yearbook 1977-78. Morges, Switzerland.

Auffenberg, W., 1988. Grays Monitor Lizard. University of Florida Press, Gainesville.

Auffenberg, W. (Florida State Museum) in lit., to L. Klös, 1 November 1988.

Sison, R. V. (Pambansang Museo, Manila) in lit. to L. Klös, 4 October 1988.

Doc. 0964c

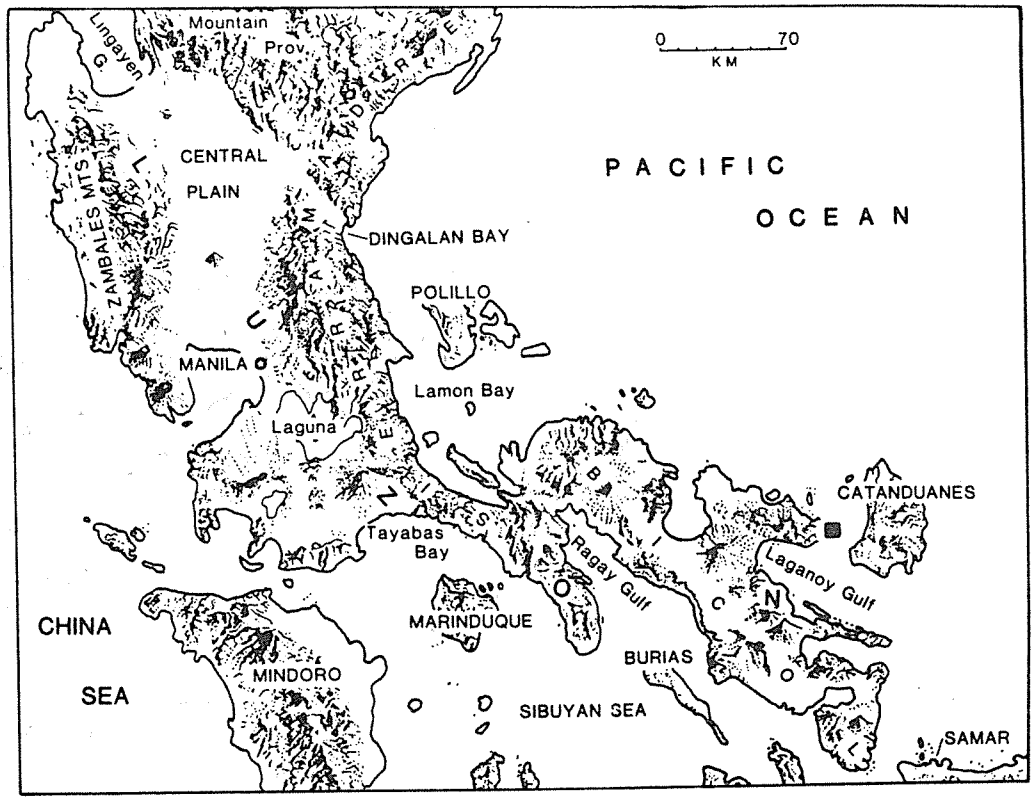

Fig. 6-1. Map of major physiographic features within the range of *V. olivaceus*. The solid square shows the location of the study area.

(Auffenberg, 1988)

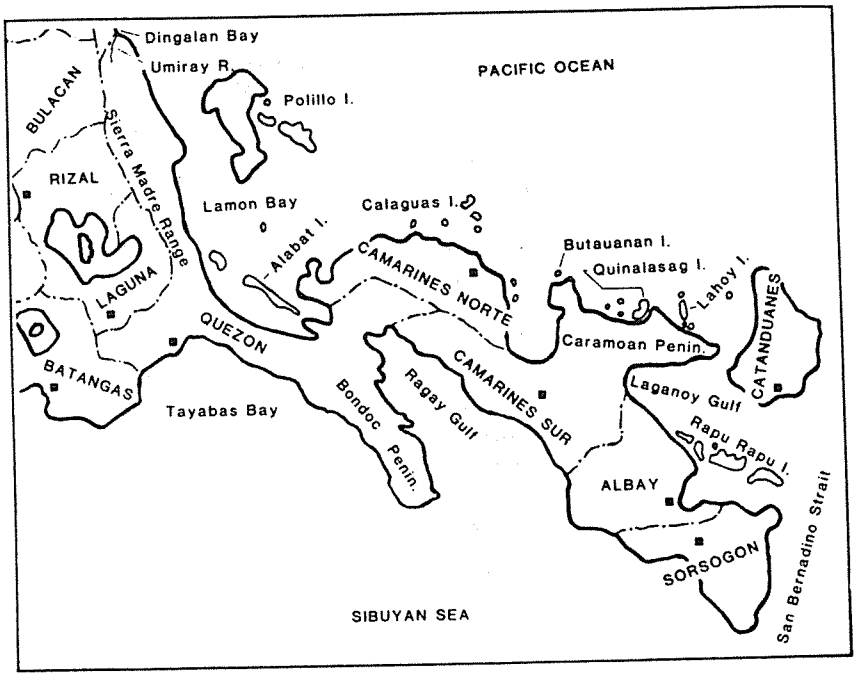

Fig. 6-2. Provincial and other important geographic names mentioned in the text. Squares show location of major provincial towns.

(Auffenberg, 1988)

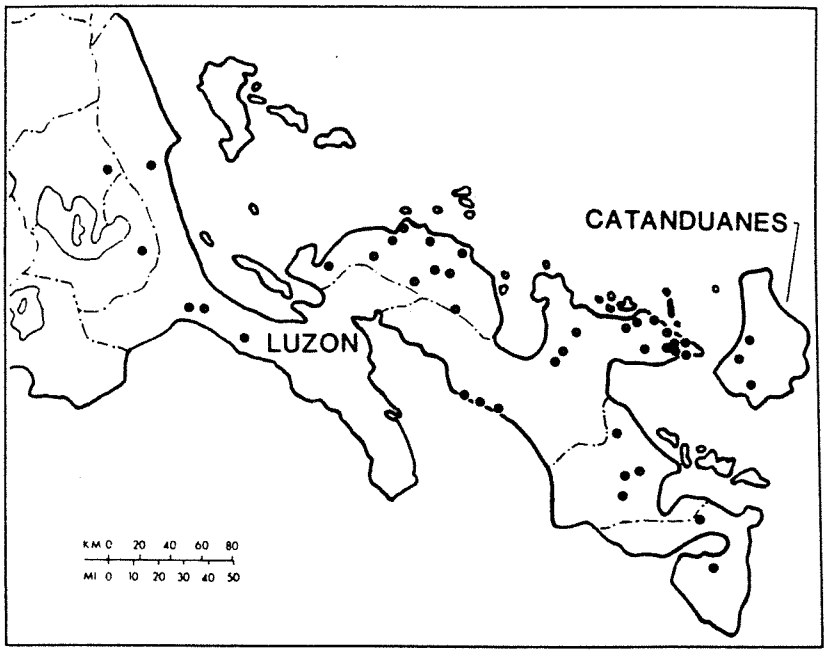

Fig. 6-3. Solid circles show localities in which *V. olivaceus* is currently known. See fig. 6-2 for geographic names.

(Auffenberg, 1988)

TABLE 6-1. Approximate area per province in which *V. olivaceus* is found.

Province	Total area (km^2)	*V. olivaceus* habitat (km^2)	Percent of total area
Catanduanes	3,785	550	15
Albay	4,001	475	12
Sorsogon	2,054	140	7
Camarines Sur	5,336	890	17
Camarines Norte	21,147	380	2
Quezon	11,957	1,795[a]	15[b]
Laguna	1,204	215	18
Rizal	2,049	530	26
Bulacan[c]	2,516	645	5
Nueva Ecija[c]	5,492	250	5
Aurora[c]	4,565	110	2
Total	64,106	5,980	9

a. Plus 880 km^2? No records yet.
b. Or 22 percent? No records yet.
c. No records yet.

(Auffenberg, 1988)

Republic of the Philippines
Department of Environment and Natural Resources
PROTECTED AREAS AND WILDLIFE BUREAU

NOV 15 1988

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

M a d a m:

This refers to your letter- proposal dated 20 September 1988 to transfer Gray's Monitor Lizard (Varanus grayi) from Appendix II to Appendix I of CITES.

The study on this particular species was undertaken by Walter Auffenberg of the University of Florida, Gainesville, Florida, USA in 1976, 1978, 1981-83 for a period of 22 months. It is from his works and publication "Gray's Monitor Lizard" 1988, that the following information were taken:

Population Status: Butaan is common and apparently, it can survive and reproduce even in disturbed forested situations.

Historical and Current Distribution: The species was considered one of the rarest lizards in the world. Taylor, (1922) declared it to be either extremely restricted geographically or perhaps extinct. During the studies made by Auffenberg (1976-1983) it shows clearly that Butaan is more widely distributed than previously documented. His work establishes that it occurs all the way to the northeastern corner of Luzon along the Sierra Madre Range.

They are apparently restricted to Catanduanes and Luzon Island, occurring from sea level to a maximum known elevation of about 400 m. This range is slightly higher than the upper limit of the Lowland Mixed Dipterocarp forest association in the Philippines. The 48 localities where Butaan occurs has an average elevation of 175 m.

Habitat Destruction or Alteration: The original lowland forest that is home to the Butaan have been destroyed by urbanization, agriculture and lumbering, and any appropriate habitat left is found in more dissected upland areas. Presently its known suitable habitat has been reduced to 65%.

Quezon Avenue, Diliman, Quezon City, Philippines
Telephones: 97-85-11 to 15

Commercial Value and Utilization: Butaan is rarely caught and only 0.5% could be accounted for being processed in all monitor lizard skins processing plants. Commonly hunted for food, but hunters do not go out specifically for them.

Legal and Illegal Trade: Collection are allowed only for scientific studies. The species along with other varanids were prohibited for collection and export since 1985.

Based on the aforestated information we recommend for the species to remain in Appendix II.

Thank you for your interest and concern for our wildlife species particularly the Gray's Monitor Lizard.

Very truly yours,

J. B. ALVAREZ, JR.
Director

pd/gvg

Quezon Avenue, Diliman, Quezon City, Philippines
Telephones: 97-85-11 to 15

THE FLORIDA STATE MUSEUM
PETER BENNETT, Ph.D.
Director

RESEARCH • EXHIBITS • EDUCATION
UNIVERSITY OF FLORIDA
904 / 392-1721

Nov. 1, 1988

Lydia Klös
Zoo Wuppertal
Hubertusallee 30
5600 Wuppertal 1
West Germany

Dear Ms. Klös:

I have no information about Varanus grayi other than what is in the book. Since writing it I have heard of a possible specimen from somewhat further north in Luzon, along the Sierra Madre Mt. Range, but this has not been confirmed. Additionally, I know nothing about trade other than what might have been mentioned in the book. As stated in the chapter on conservation the main threat is cutting of the forests. It is not, to my knowledge, being bred in any zoos. A few are, however, being kept in zoos. Dallas (Texas) Zoo, New York Zoological Society (Bronx Zoo) are two in the US that I am sure of. Los Angeles and Miami are reputed to have one each, but I have not checked on this. A few arrived here in the U.S. for the zoo trade last year (supposedly 13 individuals), but they became scattered in the hands of a few zoos and individuals. A few have since died and we have recieved the same for further research. I do not think it is in danger of extinction at present, but if I were involved in CITES I would rather err on the conservative side. Mrs. Luis Gonzales, Park and Range Division, Forestry Dept., Ben Lohr Bldg., Quezon Blvd., Quezon City, Manila should be able to tell you something about how many have left the Philippines legally, for it is that office that issues permits. Miss Gaulke (address in Frankfurt unknown to me at present) should be able to provide a better address than that above, for I am typing from memory.

REPUBLIKA NG PILIPINAS
MINISTRI NG EDUKASYON AT KULTURA
PAMBANSANG MUSEO
LIWASANG RIZAL, MAYNILA

October 4, 1982

Lydia Kloe
Zoo Wuppertal
Hubertusallee 3.
5600 Wuppertal
Federal Republic of Germany

Dear Miss Kloe,

Your letter was forwarded to the herpetology section. Your proposal is being considered and agreeable to us since we are really concern on the conservation of endangered species.

Last year, a private foreign individual shipped some specimens to the middle east allegedly with permit from the Philippine Parks and wildlife office of the Bureau of forest development. he also informed us that it is still abundant in southern Luzon. It proved that the habitat are still intact.

Their commercial values lies on the fact that they constitute food meat of the populace, and their skin are tanned for production of belt, bags, shoes and purses. Some were stuffed and sold as collector's item.

The Parks and Wildlife, under the Bureau of Forest Development is the specific government office that handle the conservation and protection of wildlife in our country.

We look forward that the information aforementioned will be of some help to you.

Very truly yours,

Rogelio V. Sison
In-chagge herpetology