CONSIDERATION OF PROPOSALS FOR AMENDMENT OF APPENDICES I AND II

A. Proposal

Inclusion of *Notochelys* spp. in Appendix II, in accordance with Article II, paragraph 2 (a) of the Convention, and Resolution Conf. 9.24 (Rev. CoP12), Annex 2 a, paragraph B i).

NB: the genus *Notochelys* is currently known to contain the single species *Notochelys platynota*.

B. Proponent

The United States of America in accordance with the consensus recommendations of the CITES-sponsored Technical Workshop on Conservation of and Trade in Freshwater Turtles and Tortoises in Asia, held in Kunming, China in March 2002, and the Animals Committee Working Group on Tortoises and Freshwater Turtles.

C. Supporting statement

1. Taxonomy

1.1 Class: Reptilia

1.2 Order: Testudines (Chelonia)

1.3 Family: Bataguridae (Geoemydidae)

1.4 Genus: *Notochelys* Gray 1863

   Species: *Notochelys platynota* Gray, 1834

1.5 Scientific synonyms: None in use in recent decades. Detailed synonymy is provided by Wermuth and Mertens (1961: 132)

1.6 Common names:

   English: Malayan flat-shelled turtle
   French: Tortue-boîte à dos plat
   Spanish: 
   Bahasa Indonesia: Beiyogo
   Bahasa Melayu: Kura punggung datar, Biuka, Kátong
   German: Plattrücken-Schildkröte
   Thai: Tao Tab-tim

1.7 Code numbers: ---

1.8 Taxonomic notes: *Notochelys platynota* is the only species assigned to the genus *Notochelys*. The genus was described by Gray in 1863, synonymised with *Cyclemys* by Boulenger (1889), and resurrected by Siebenrock (1903) for the species *platynota*. It has been recognized as a valid monotypic genus consistently since the early 1900s (de Rooij 1915, Smith 1931, Bourret 1941, Wermuth and Mertens 1961, Iverson 1992, David 1994).
2. **Biological parameters**

2.1 **Distribution**

Brunei Darussalam, Indonesia, Malaysia, Singapore, Thailand, Myanmar?, Viet Nam?

Notochelys platynota is restricted to the southern part of the Malay Peninsula and parts of the Malay Archipelago, occurring from Tenasserim (Myanmar) and Surat Thani (Thailand) southwards through Malaysia and Singapore to Sumatra, Banka, and Borneo (Iverson 1992). This species has often been confused with Cyclemys and historical records from Myanmar and Viet Nam might be in error.

2.2 **Habitat availability**

Notochelys inhabits mainly streams and other shallow waters in lowland rainforest areas (Moll and Khan 1990, Sharma and Tisen 2000). It has been reported as high as 1200 m altitude in the Tengger mountains of Java (de Rooij 1915). The species is uncommon to rare in areas of human development (Moll and Khan 1990, Sharma and Tisen, 2000). Suitable habitat exists throughout the species’ range, although it is becoming increasingly fragmented and reduced by logging and conversion of primary forest for plantations and agriculture (MacKinnon 1997, van Dijk and Palasuwan 2000, Sharma and Tisen 2000).

2.3 **Population status**

Brunei Darussalam: The species was rarely encountered during intensive surveys of the Batu Apoi forest (Das 1995). Indonesia: Samed and Iskandar (2000) noted that information from traders and collectors indicated that populations of Notochelys had declined considerably. They were described as ‘from extremely common in the late 1980s to reasonably common at present’ (IUCN/SSC TFTSG and ATTWG, 2000). Iskandar (2000) rated the species as ‘rather common, abundant in some streams.’ Samedi et al. (2002) listed the species as ‘Uncommon’ for Indonesia. Fritz and Gaulke (1997) noted the species is an uncommon component of turtles traded in North Sumatra. Malaysia: Historically, Notochelys was one of the most commonly seen freshwater turtle species in Peninsular Malaysia (Boulenger 1912). In contrast, Sharma (1999) stated that the species was rarely seen by the 1990s, and suspected that the species’ absence from the local pet and meat trade potentially indicated the species’ low abundance in non-forested habitats (Sharma and Tisen, 2000). Intensive herpetological surveys carried out within prime habitat for the species have recorded occasional individual animals or frequently encountered the species (Kiew 1987, Sharma et al. 1996, Sharma and Tisen 2000). No status data appear to be available for Sarawak or Sabah. Myanmar: Occurrence of the species in Myanmar remains unconfirmed. If it occurs, it is likely to be localized and uncommon. Singapore: Notochelys was considered ‘uncommon’ in Singapore (Lim and Lim 1992). Thailand: The OEPP Red List of threatened species in Thailand listed Notochelys platynota as ‘Vulnerable’ (OEPP 1997). The species reaches the northern limit of its distribution in southern Thailand, and is believed to be uncommon (van Dijk and Palasuwan 2000). Viet Nam: Notochelys has been reported in Vietnam in 1903 (Siebenrock 1903). Since then, the species has not been found despite extensive trade observations (Le Dien Duc and Broad 1995, Lehr 1997, Hendrie 2000).

2.4 **Population trends**

As detailed in section 2.3, above, populations of the species are known or suspected to have declined in number and become fragmented significantly in recent years. The 1996 IUCN Red List of Threatened Animals considered Notochelys Data Deficient. In the 2000 IUCN Red List the species was rated as Vulnerable due to an observed, estimated, inferred or suspected population reduction of at least 20% over the last three generations. Exploitation pressures are projected to continue during the next three generations.
2.5 Geographic trends

Available data indicates that recent and ongoing collection pressure and habitat loss are most intensive in Indonesia and Peninsular Malaysia, and less severe in Singapore and southern Thailand.

2.6 Role of the species in its ecosystem

Notochelys platynota is predominantly herbivorous, feeding on plants and fruits, specifically figs and palm fruits. To a lesser extent, it feeds on snails and arthropods (Moll and Khan 1990, Iskandar 2000).

2.7 Threats

The species is traditionally collected and consumed when encountered by rural people through much of its range. This appears to have depleted populations in many areas (see 2.3 and 2.4, above). More recently, the species has become sought after for export to East Asia along with other turtle species. Collection pressures have intensified and extended into areas previously not impacted by collection. More trappers are illegally operating in some forest reserves and parks in Peninsular Malaysia (Sharma and Tisen 2000). The pet trade is not considered to represent a significant impact on the species (Sharma, 1999, Lim and Das, 1999).

Selective logging of forests disrupts forest hydrology and may have impact on this semi-aquatic species. The network of logging roads also allows for easy access for trappers and traders. Large-scale conversion of forests to palm-oil plantations and other land uses rapidly diminish available habitat for the species in Peninsular Malaysia (Sharma and Tisen 2000) and elsewhere.

3. Utilization and trade

3.1 National utilization

Subsistence utilization of this species occurs by the indigenous hunter-gathering peoples of the Indo-Malayan rainforests. Remains of Notochelys were recorded from encampments of Orang Asli of the Bateq tribe in Taman Negara in Peninsular Malaysia (Moll and Khan 1990). Sharma (1999) described capture of Notochelys by Orang Asli of the Temuan tribe, and van Dijk (1999) was told of Sakai tribe people using this and other turtles for subsistence in southern Thailand. A large proportion of Indonesian harvest and trade is destined for export, but there also exists a domestic market for turtles for consumption, pets, and medicine (Samedi and Iskandar, 2000).

In Sumatra, Notochelys was one of the less frequently traded species in 1996-1997, with only 9 animals observed at two traders in Rantauprapat and Cikampak over a 3-month period (Fritz and Gaulke 1997). Similarly, only 40 (1.4%) Notochelys were observed among about 2,900 turtles held at an exporting company in Medan (Shepherd 2000). At middleman purchasing prices of IDR 4,000 per kg (USD 0.45 per kg) at Duri and IDR 9,000 to 10,000 per kg (USD 1.01 to 1.12 per kg) value at exporters in Medan and Tembilahan, Notochelys is one of the cheapest turtles in Sumatran trade. This low price is due to its high mortality rate, reportedly 10% even before the turtles are shipped (Shepherd 2000).

3.2 Legal international trade

Indonesia: The CITES Management Authority of Indonesia set a quota of 2,200 animals for 2002, and 241 specimens were recorded as exported. In 1999, the quota was 450 animals and recorded exports numbered 460. In 2000, the quota of 500 specimens was approached by the 465 specimens recorded as exported. In 2001, the quota was increased to 2,100 specimens and declared exports amounted to 1,614 specimens (Samedi et al. 2002).

Malaysia: Available statistics from Perhilitan show that during the first 10 months of 1999, 12,300 Notochelys were exported from Peninsular Malaysia, representing about 1.3 % of the wild-collected turtles exported during that period (Sharma and Tisen 2000).
P.R. China and Hong Kong S.A.R.: Notochelys platynota is sold in food markets in southern China (Lau and Shi 2000). Trade in the species developed recently. Notochelys was not recorded during monthly surveys of food markets, mainly in Guangdong province, from November 1993 to October 1994 (Lau et al. 1995). By 1999, the species was traded in East Asian food markets at peak levels of 2000-3000 kg daily, after proportionally very high mortality during transport (Chan and Kan, in IUCN/SSC TFTSG and ATTWG 2000). Similar trade levels were observed in May 2000 (van Dijk, in litt. to BfN 2002), and ‘hundreds of ... Notochelys platynota, ... ’ were offered in the Qing Ping market, Guangzhou, 6-9 November 2000 (Artner and Hofer 2001). Notochelys was consistently present in the food trade in Hong Kong in 1998-1999 (Lau et al. 2000). A survey of 3 food markets in Guangzhou and Shenzhen, China, and one turtle trader in Hong Kong SAR carried out between 30 October 2000 and 13 October 2001 observed 2,685 specimens offered for sale, representing about 1.7% of total turtles recorded. One animal was observed in surveys of 5 pet shops in Hong Kong and one pet market in Guangzhou. These markets and shops were surveyed twice during every winter month and once during each summer month, thus, the number observed is a minimum number, not an approximation of total annual turnover (Ades 2002).

3.3 Illegal trade

There are no indications of significant illegal trade. It must be noted, however, that some animals amounting to the total annual quota from Indonesia could be observed several times over on a single day on a single large market in Guangzhou, P.R. China, indicating a significant problem with misidentified or undeclared international trade shipments.

3.4 Actual or potential trade impacts

Collection of specimens for local and international trade has significantly depleted populations of the species. Samedi and Iskandar (2000) predicted that without further control on the trade, Indonesia’s native freshwater turtles, including Notochelys platynota, ‘will certainly decline’. Samedi et al. (2002) concluded that ‘trade in freshwater turtles and tortoises, together with habitat loss and destruction, has contributed to the decline in the populations. The population decline can be inferred from the decline of the trade statistics over time despite the stable or even increased demand.’

Inclusion of Notochelys platynota in Appendix II is intended to regulate and monitor exploitation of the species for international trade, and will reduce illegal or quasi-legal international trade in the species as it affords greater control over imports in recipient Parties. This can be accomplished through non-detriment findings, quotas, and other mechanisms. In Indonesia, Notochelys platynota in CITES Appendix II will result in a transfer of jurisdiction over management of the species from the Fisheries Department to the Directorate General of Forest Protection and Nature Conservation of the Ministry of Forestry (Indonesian CITES Management Authority).

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

Notochelys is difficult to maintain in captivity, and few animals survive long-term even with optimal care and devotion by hobbyists (Buskirk 1997). No records of captive breeding, either by hobbyists or for commercial purposes, appear to exist.

4. Conservation and management

4.1 Legal status

4.1.1 National

**Brunei Darussalam:** The Wild Life Protection Act 1981 provides for the declaration of wildlife sanctuaries, in which all forms of hunting and collecting of any mammal, bird, reptile, or fish are prohibited. It also allows the establishment of closed seasons for any kind of wildlife. The First Schedule, Part A, lists species that are protected from hunting,
killing, or capture except for scientific purposes under license, it does not list *Notochelys platynota* (Gaski and Hemley 1991).

**Indonesia:** *Notochelys platynota* is currently not protected by domestic Indonesian legislation. Until the species is included in domestic species protection, it is considered a fishery resource under Act No. 9/1985 concerning Fisheries. Under this Act, permits for exploitation and trade of specific quantities of unspecified freshwater turtles are issued by the local district government through its Fisheries Services (Samedi et al. 2002).

**Malaysia:** Legislation governing freshwater turtles is complicated by its division of responsibilities between Federal and State authorities regulating Wildlife and Fisheries. State fisheries legislation in Johore, Kelantan, and Negeri Sembilan can be interpreted to protect *Notochelys platynota*. Coverage under Malacca State legislation is unclear. Exports of freshwater turtles from peninsular Malaysia comes under the remit of the Federal Department of Wildlife and National Parks of Peninsular Malaysia (Gregory and Sharma 1997). In Sarawak, the Wild Life Protection Ordinance 1998 does not list *Notochelys* as a protected species. While in Sabah the species is not protected under the Wild Life Enactment 1997 (Sharma and Tisen 2000).

**Myanmar:** *Notochelys platynota* is not listed in the Protection of Wildlife, Wild Plants and Conservation of Natural Areas Law of Myanmar, 1994 (U Kyaw Moe et al. 2002).

**Singapore:** Native wildlife species, including freshwater turtles, are protected under the Wild Animals and Birds Act (WABA), 1965, Chapter 351. While this Act does not specifically name *Notochelys platynota*, it effectively protects the species since prior permission is needed to trap any turtle or other native animal species from anywhere in Singapore, and permission is only granted in exceptional cases such as scientific research (Theng 2002). Import, export, and transhipment of species protected under the WABA are prohibited unless licensed by the Director of Primary Production (Gaski and Hemley 1991). In addition, the National Parks Act ensures conservation of native fauna and flora through designation of protected areas and making it an offense to take animals from protected areas (Theng 2002).

**Thailand:** This species is protected from exploitation under the Thai Wild Animals Reservation and Protection Act, B.E. 2535, Schedule 2 (2 special).

4.1.2 International

*Notochelys platynota* is not specifically covered by bilateral or inter-governmental legislation. Under Notice of Strengthening the Trade Management on Turtles and Tortoises, issued on June 17, 2001, China suspended all commercial imports of all turtles from Cambodia, Indonesia, and Thailand, including *Notochelys platynota*. All imports of turtles into China from other countries need to be accompanied by export permits or certificates from the exporting country, and turtle imports are restricted to a small number of designated ports and airports.

4.2 Species management

4.2.1 Population monitoring

No specific population monitoring efforts are known to have been carried out, to be in progress, or to be in preparation in any of the Range States. Incidental population assessments are summarized in sections 2.3 and 2.4.

4.2.2 Habitat conservation

**Brunei Darussalam:** *Notochelys* inhabits Batu Apoi National Park at low densities (Das 1995).
Indonesia: The species is likely to occur in areas of protected forest in Sumatra, Kalimantan, and Java, but no specific confirmed occurrences are available (Samedi and Iskandar 2000).

Malaysia: *Notochelys* inhabits several protected areas, including Taman Negara (Moll and Khan 1990), Endau-Rompin State Park (Kiew 1987), and Perlis State Park (Sharma et al. 1996) in the Peninsula, and Sepilok and Danum Valley in Sabah. The species is unconfirmed but expected to occur in the Krau Wildlife Reserve and Royal Belum State Park (Sharma and Tisen 2000) in the Peninsula. Although there are no records of occurrences in the protected areas of Sarawak, the species is expected to inhabit several these areas.


Singapore: *Notochelys* is confirmed to inhabit the Bukit Timah Forest Reserve (ZRC specimen).

Thailand: Significant areas of remaining natural vegetation have been protected in Thailand under the Wild Animals Reservations and Protected Areas Act, 1992. These include large hill areas of evergreen rainforest (Gray et al. 1994, MacKinnon 1997) which provide suitable habitat for *Notochelys platynota*. A population of the species occurs in Thaleban National Park, and other populations are likely to occur elsewhere in protected forest areas of the Peninsula (van Dijk 1999).

4.2.3 Management measures

No specific management measures for *Malayemys* are known to be in place or planned in any of the Range States.

4.3 Control measures

4.3.1 International trade

Exported specimens are subject to national regulations pertaining to species trade, customs, and quarantine measures when entering the importing country. In most countries, regulations require compliance with the International Air Transport Association (IATA) regulations concerning the shipping of live animals, as a condition for acceptance or transit passage through airports (IATA Live Animals Regulations, Chapters 1 and 2). In addition, most airlines require shipping of live turtles to comply with the IATA regulations (IATA Live Animals Regulations, Appendix A).

4.3.2 Domestic measures

All Range States with domestic legislation protecting *Notochelys platynota* and/or parts of its habitat make efforts to implement these protective measures, though turtles often remain low priority.

Indonesia is the only Range State, which has implemented a quota system for *Notochelys platynota*. Monitoring and implementing the quotas continues to present challenges.

5. Information on similar species

The species is very similar to members of the genus *Cyclemys* and the genuses have been widely confused in the literature (see Mertens, 1942). Specimens of *Cyclemys* have a sixth vertebral scute only as an abnormality. *Cyclemys* also usually have a radiating pattern that can be discerned on the scutes of the plastron and lack the curved tips of the supracaudal scutes.
6. **Other comments**

Inclusion of *Notochelys platynota* in CITES Appendix II has been advocated by the following groups:

The Asian Turtle Trade Working Group (2000) recommended inclusion of all Asian tortoise and freshwater turtle species in Appendix II, including *Notochelys platynota*.


In its presentation at the Kunming workshop, Indonesia specifically listed *Notochelys platynota* as a species to be discussed for listing (Samedi et al. 2002).

Chelonian Research Foundation, in an Annex to document AC19 Doc 15.1 prepared by the United States of America (USA 2003) proposed inclusion of *Notochelys platynota* and 23 other freshwater turtle species in Appendix II.

7. **Additional remarks**

None.

8. **References**


