

# Studbook breeding program

## *GEOCLEMYS HAMILTONI*

Gray, 1831

Hamilton's Black Pond Turtle -- Hamilton's terrapin -- Black Pond Turtle,  
Black Spotted Turtle -- Spotted Black Terrapin -- Indian Spotted Pond Turtle  
North Indian Freshwater Tortoise -- Indian Spotted Turtle -- Géoclemyde d'Hamilton  
Tortue de Hamilton -- Gálapago rayado -- Galápagoteado asiático  
Strahlen-Dreikielschildkröte -- Driekielstraalschildpad



Photo by Harry J. Rotmans

## ANNUAL REPORT 2014-2015

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## 1. INTRODUCTION

The *Geoclemys hamiltoni* belongs to the family of turtles *Geoemydidae* (formerly known as *Bataguridae*) and is the only surviving member of the genus *Geoclemys*. There are no recognized subspecies and there are no geographical variations known yet.

GH is one of the largest species of turtles from the Old World.

To adults are attributed different sizes, from 30 to 40 cm. (Rashid & Swing 1997). But over the years specimen have been observed even 55 to exceptional 60 cm.

Upon a normal growth this species reaches after about 18 years a length of 30 cm. Of course, this depends on many factors.

The sexes differ little in size, but the females are slightly larger. The weight of adult animals can vary from 5 to 9 kg.

### World legal situation

#### **International Union for Conservation of Nature, 1948 (IUCN).**

The legal status of *Geoclemys hamiltoni* according to the IUCN Red List of Threatened Species, Version 2015.4 <http://www.iucnredlist.org/details/9029/0> is Vulnerable.

#### **Convention on International Trade of Endangered Species of Wild Fauna of Flora (CITES)**

The *Geoclemys hamiltoni* is also still on the CITES list Appendix I.

<http://www.cites.org/eng/app/appendices.php>

CITES does not take the place of national legislation, but provides a legally binding framework for the participating countries. Each participating country must establish its own legislation based on CITES.

## India

In the Indian Wildlife (Protection) Act, 1972, list1, the species is classified under Schedule I Vulnerable. In Northern India are created a number of sanctuaries in which also *Geoclemys hamiltoni* is flourishing.

## Bangladesh

In the Bangladesh Wildlife (Preservation) Act, 1974, lijst III, and the Red Book of Bangladesh, 1999, the species is classified Endangered.

## Pakistan

Recently, however, proved yet that the Sindh government in Pakistan didn't give the protected status to *Geoclemys hamiltoni* till now.

Local authorities say incidentally glass hard not to be aware of a trade, even though this has been demonstrated by many published reports.

Pakistan is under pressure to regulate such protection.

## Nepal

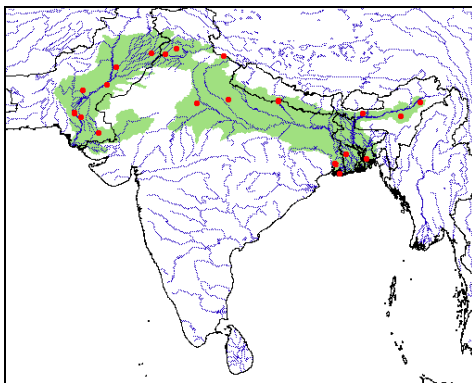
No information is available. But most recently Indian are arrested with 109 *Geoclemys hamiltoni*. The plan is to place these animals in the Amphibian and Reptile Conservation Society of Nepal (ARCO Nepal) <http://www.arco-nepal.de>

## Europe

In the European Union *Geoclemys hamiltoni* is listed under Annex A of Council Regulation (EC) No. 338/97, Implementing Regulation (EC) No. 865/2006 and Comission Regulation (EC) No. 318/2008.

## Netherlands

In the Dutch Flora en faunawet (NL.Stb. 1998, 402) the species is classified Endangered.



Distribution in the northern Indian subcontinent, Pakistan, Bangladesh.

The threat to this species has several causes. First the bad situation in the natural habitats continues. Too much rain, tsunami, storm and agriculture expansion will destroy the nests on the riverbanks. The increased big floods of the riverbanks especially in Bangladesh are still disastrous for the nests. It's not to predict what the consequences of the global warming will be in the habitats in the future. Awareness of the environmental damage is an important step in the search for solutions.

In addition, it is notable that this species also increasingly more kept as pets. Also noteworthy that this species is more spectacular kept as pets, especially in China. Therefore many specimen are coming from in the wild.

To build up a genetic healthy population in captivity of this species for the future in Europe is still a very important issue.

The ongoing seizures in 2014 and 2015 show that the smuggling of this kind is still continuing. Also on the food-and-trade market in China is still *Geoclemys hamiltonii* observed, but recently lesser in large numbers.



Sep.21, 2014: 200 Gh. found in luggage onboard Bangkok flight.



Nov.11, 2015: 42 Gh. rescued in Pakistan.



Chinese food market.



Care of seized Gh.



## 2. NATURAL HISTORY

In 1993 Rotmans bred *Geoclemys hamiltoni* in captivity in Europe for the first time. Many years there was only one breeding pair in Europe. In the meantime there arose a large F2 generation in Europe.

In 1995 Lowry Park Zoological Garden Tampa USA had the first hatchlings.

In 2005 the studbook *Geoclemys hamiltoni* was enlarged with two adult couples of the Hong Kong SAR government and Kadoorie Farm and Botanic Garden (KFBG) of Hong Kong, China. These new bloodlines are very important in the studbook.





Male



Male



Female



Female

One of these adult pairs (adult numbers E and F) is placed at Artis Zoo, Amsterdam NL. This wild couple has laid eggs in 2011 for the first time in captivity. One hatchling was born on June 6, 2011. In 2015 this hatchling has moved to London Zoo, United Kingdom. In 2015 the adult pair of Artis Zoo has moved to Reptile Zoo Terrariet Vissenbjerg, Denmark. To build up a genetic healthy population in captivity of this species for the future in Europe is still a very important issue.

The other adult pair (CD63) is placed with Cologne Zoo DE. This has 16 hatchlings produced. Unfortunately the male of this couple died. The female is thus moved to Leipzig Zoo, DE. Cologne Zoo then received four captive-bred animals of the former breeding pair CD63.



Photo by Henk A. Zwartepoorte



Photo by Harry J. Rotmans : 56 years old male B62

### 3. STUDBOOK POPULATION

December 2015 in the Studbook *Geoclemys hamiltoni* are 323 animals registered:

49 adult wild genetic independent turtles (2 males and 1 still unknown are dead).  
274 F1 hatchlings (19 are dead).



Hatchlings:	2000 - 16	2008 - -
1993 - 6	2001 - -	2009 - 8
1994 - 23	2002 - -	2010 - -
1995 - 40	2003 - 20	2011 - 1
1996 - 22	2004 - 10	2012 - -
1997 - 30	2005 - -	2013 - -
1998 - 21	2006 - 36	2014 - -
1999 - 31	2007 - 4	2015 - 5

Because of the very many F1 hatchlings and the impossibility to keep those animals all in The Netherlands, most hatchlings has been transported in the past

15 years to other European countries and unfortunately go out of sight at a certain moment, so at this moment the sex of all these animals isn't always clear. Unfortunately not every studbook participant cooperates fully of his own accord.

Through multiple transfers of young and semi-adult turtles of the Hong Kong authorities meanwhile the number of bloodlines in Europe greatly increased. This promotes the build-up of a good studbook population.

#### **4. LOCATIONS**

December 2015 there are in total 49 locations registered:

Netherlands	- 20	Germany	- 8	Belgium	- 2
United Kingdom	- 6	Bonaire	- 1	Spain	- 1
Italy	- 3	Austria	- 2	Denmark	- 1
France	- 1	Czech	- 1		
Sweden	- 2	Majorca	- 1		

Among all these locations are at this moment 11 zoos: 1 in the Netherlands, 3 in the United Kingdom, 1 in Corsica FR, 2 in Sweden and 4 in Germany.

In Spain participates 1 private breeding and study centre. This centre strive to become also a EAZA member.

Not all these locations still have *Geoclemys hamiltoni* in December 2015.

#### **5. IMPORTS**

In 2014, 31 confiscated turtles from the Hong Kong SAR government are arrived in Europe and 24 are registered in this studbook. For some specimens Chester Zoo UK and Emmen Zoo NL are also willing to place some of these animals in their reptile collection.

All these new bloodlines are very welcome.

In 2015 there were no imports from Hong Kong.

#### **6. DEATHS**

In 2014 and 2015 are no deaths.

#### **7. TRANSFERS**

In 2014 and 2015 are no transfers between private locations. In 2015 three turtles were transferred from one zoo to two other zoos.

#### **8. DISCUSSION**

In the experience of Rotmans and Artner it is not always necessary to separate the turtles by gender for successfully breeding this species, provided enough space (water and land) is absolute available. But like Artner rightly notices crowded conditions can lead to market aggression, especially by females against females. Rotmans experiences that *Geoclemys hamiltonii* females are usually more aggressive than males.

Young and semi-adult specimens can be kept together. But plenty of living space with some hidden potential is always important for all *Geoclemys hamiltonii*. However the lack of space is a hindrance for keeping adult specimen for many private turtle lovers.

This subject remains in focus in the coming period.

Some time ago there was a discussion about the swimming abilities of these turtles. They turn out to be no poor swimmers, but in captivity must be taken to ensure that the water level is maintained proportionate to the size of the animals. This is also a subject that remains in focus.

Sufficiently high temperatures, high quality feeding and a reasonable quiet environment are decisive factors for successful breeding.

## **9. ACTIVITIES in 2016 and further**

1. Once again the aim is to enlarge a genetic healthy population in captivity of this species for the future in Europe. Therefore the breeding with the very old adults A62 and B62 is already stopped in 2009 in connection with the very large number of hatchlings in the previous period.

2. It is very important that all other studbook breeding pairs from the wild in the Netherlands, Belgium, Germany, Spain, Denmark and the United Kingdom will produce hatchlings of these new bloodlines. At a later stage F1 hatchlings of these other adult pairs can be linked to the F1 captive-bred animals of the old breeding pair AB62. In this way, a genetically healthy population in Europe can be built up.

3. The cooperation between privates and zoos should be intensified. Not every zoo sees the benefits immediately. But the Draft Memorandum of Understanding (MOU) between the European Studbook Foundation (ESF) and the European Association of Zoos and Aquaria (EAZA) 4 July, 2012 (Jointly working towards sustainable amphibian and reptile populations in human care - on a non commercial basis -) is a very good base for this cooperation.

4. Also keepers of *Geoclemys hamiltonii*, who do not participate until this moment in this studbook and recognize the important of cooperation, are gladly invited to contact the studbook keepers.

Important herewith is the determining of the genetic origin of their specimen.



5. It is planned to publish more information on the in situ situation and the ex situ situation including keeping, housing and behaviour of the *Geoclemys hamiltonii*.

April 2016, the Netherlands,

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### **Organizations**

CONVENTION on INTERNATIONAL TRADE in ENDANGERED SPECIES of WILD FAUNA and FLORA (CITES), is an international agreement between governments. Its aim is to ensure that international trade in specimens of wild animals and plants does not threaten their survival.

<http://www.cites.org/>

INTERNATION UNION for CONSERVATION of NATURE (IUCN), has as its central mission the preservation of biodiversity.

Biodiversity is fundamental to addressing some of the world's greatest challenges such as climate change, sustainable development and food security.

<http://www.iucn.org/>

#### IUCN RED LIST

The IUCN Species Programme working with the IUCN Species Survival Commission (SSC) and many partners assesses the conservation status of species, subspecies, varieties, and even selects subpopulations on a global scale in order to highlight taxa threatened with extinction, and therefore promotes their conservation.

The IUCN Species Programme provides the world with the most objective, scientifically-based information on the current status of globally threatened

biodiversity. The scientifically rigorous approach to determine risks of extinction that is applicable to all species, has become a world standard.

The plants and animals assessed for the IUCN Red List are the bearers of genetic diversity and the building blocks of ecosystems, and information on their conservation status and distribution provides the foundation for making informed decisions about conserving biodiversity from local to global levels. The IUCN Red List of Threatened Species provides taxonomic, conservation status and distribution information on plants and animals that have been globally evaluated using the IUCN Red List Categories and Criteria.

[http://www.iucn.org/about/work/programmes/species/our\\_work/the\\_iucn\\_red\\_list/](http://www.iucn.org/about/work/programmes/species/our_work/the_iucn_red_list/)

TURTLE SURVIVAL ALLIANCE (TSA), is a recognized force in turtle and tortoise conservation globally and transforms passion for turtles into effective conservation action through a global network of living collections and recovery programs. <http://www.turtlesurvival.org/>

TSA - EUROPE,

<http://www.turtlesurvival.org/component/taxonomy/term/summary/26/7#.UzFmCGdOU5g>

TRAFFIC, the wildlife trading monitoring network, works to ensure that trade in wild plants and animals is not a threat to the conservation of nature.

The vision of the organization is of a world in which trade in wild plants and animals is managed at sustainable levels without damaging the integrity of ecological systems and in such a manner that it makes a significant contribution to human needs, supports local and national economies and helps to motivate commitments to the conservation of wild species and their habitats.

<http://www.traffic.org/>

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