

In the first section an overview of the main setups is examined. The caresheets, among 70 different species, treat with biology, behavior in captivity and in nature, maximum size, feeding and breeding methods. In every caresheet there are icons that immediately allow to identify the main and secondary setup for each species. The suggested readings and the wide bibliography represent a good guide to deepen. The large number of species examined, also unusual in captivity, makes this book adapt both for newbies and skilled breeders looking for a particular species...

AUTHORS



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Designer, he deals with interior furnishing and graphic. He grows his passion for turtles since 14 year-old age. He's interested above all Asian and American freshwater turtles, even if he has more than 30 different species. From many years he's partner and active collaborator of the TCI, for which he realized a practical manual "*Freshwater turtles*", about the most common aquatic turtles. He's author of several breeding caresheets and articles. He cooperates to the production and publication of the first Italian magazine about turtles: TESTUDO MAGAZINE. He actively joins the ESF, the European program of captive breeding of different kinds of turtles. Member of several Italian and international associations: ATCN, EFTBA - *European Freshwater Turtle Breeders' Association*, AREr - *Associazione Romana Erpetologica*, AAE.

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Euro 23,00

Freshwater turtles and terrapins

Andrea Luison
Stefano Redaelli



Andrea Luison and Stefano Redaelli Freshwater turtles and terrapins: the complete guide



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Foreword

During the past two decades the turtle and tortoise species of this planet have been in the focus of many associations, private as well as public ones. Private hobbyists have started to breed many species and incredible successes have been achieved. Only 25 years ago it was thought that most turtle species could never be bred in captivity but fortunately many breeders around the globe have proven this wrong. The contribution of these efforts and successes to the conservation of turtles cannot be estimated high enough. Unfortunately our work is not always appreciated as it should be by the authorities because it is widely thought that most private breeders are smugglers, freaks, and selfish outsiders.

This is not true, is proved – among many projects – by this book written by two Italian turtle breeders, Andrea Luison and Stefano Redaelli. After almost two years of hard work they presented a book in Italian that is up until now available in their country. Both men share a lot of experiences with turtles, be it in nature or in captivity. They have bred many species so far and I am sure that many more will follow. They are also experienced authors as both of them regularly write articles for turtle magazines like the Italian “Testudo Magazine” or the Pan-European “EMYS”.

The book presents a lot of valuable data on many turtle species around the globe. It does not only describe them in detail but also gives advice how to keep them.

The cooperation between both professional and private turtle specialists is not always as it should be and this book may play an important role in improving it. The already present fruitful cooperation between different European private turtle associations will be further pushed by this fabulous work of two men who are members in many of them.

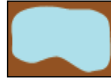
I sincerely hope that it will be widely distributed among Italian turtle enthusiasts and that it also will be available in English and other languages in the near future.

*Dr. Harald Artner, Director Chelonia 2002 Turtle Center
Chairman of the EFTBA (European Freshwater Turtle Breeders' Association)
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ENCLOSURES



Outdoor pond



It's better to fence the pond to avoid escapes.



Turtles can easily lay eggs in a sandy zone.

Many aquatic species, especially coming from mild climates, can be kept in an outdoor pond. Depending on the species, specimens can even live in the pond the whole year, or from springtime until the end of summer.

A peaceful and sunny zone with many shadowy parts for our outdoor pond accommodation is suitable. For its construction you can use preformed PVC pools, cement and nylon sheets of various size. Every material represents positive and negative aspects. Cement has no limits of shape and size, and allows you to easily attach a plastic pipe for drainage in the direction you wish. At the same time it's very expensive. During excavation you must consider a 10 cm of cement gravel waterproof with specific products. You can also plan shelves, bends for aquatic and pond plants and gradual banks. When the bottom becomes hard



Plastic pond is a cheap solution.



Concrete allows to create different shapes.

you can use a metal grating to fix cement. Nylon sheets and preformed pools are cheaper but the pond will be limited to a conventional shape.

The minimum size of an outdoor pond is 3x2, with a minimum depth of 60-80 cm in order to avoid deep freezing and for creating an ideal ecosystem. Aquatic zone should be composed of tree trunks, cork, prominent stones and hiding places in the bottom made with big stones and vases. Aquatic plants are essential: water hyacinth (*Eichornia crassipes*), water lettuce (*Pistia stratioides*), water lily, lotus and other species of plants that confer a natural appearance to the pond, helping oxygenation and natural water filtering. An environment rich in plants needs partial water change and the use of an external filter is superfluous. Use 20 cm of muddy, slimy and leaves bottom in order to allow turtles a place to hide and rest during cold nights. A thick bottom guarantees a biologic layer, but it must be reformed every year, at the end of the cold season.

Land section must be composed of sand, peat and soil, rich in undergrowth and pond plants in order to create shadowy zones and shelters for shy specimens. A large sand zone in a sunny place should help turtles in dig their nest.

Turtles may coexist with fish and water snails, in order to create a natural habitat and supply them with fresh food.



Plants must be plentiful: help to oxygenate and filter the water.

CENTRAL and SOUTH AMERICA



Hydromedusa maximiliani

Mikan, 1820 – Maximilian's Snake-necked Turtle



Geographic range



The neck, unlike other *Hydromedusa* specimens, is quite short.

DISTRIBUTION AND HABITAT

It can be found in a very unique isolated environment between Sao Paulo and Rio de Janeiro: streams and rivers belonging to the pluvial atlantic forest, with stony bottoms and clear water up to 24°C during the warm season.

SIZE

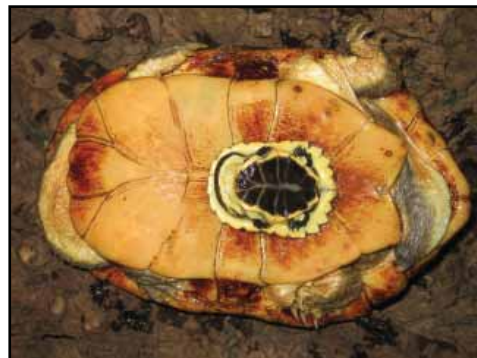
Medium size: it can achieve 20 cm. Males are bigger and sturdier than females.

HABITS

It's mainly aquatic but not a good swimmer, only during egg-laying it prefers the land. It never basks in the sun but prefers to hide of the river bottoms. It enjoys mild temperatures.



Difference between adult and some month juvenile.



Chromatic differences are clearly visible between adults and juveniles.

REST

No; it remains active the whole year because it lives in an area with constant temperature at 15-22°C.

HUSBANDRY

It needs a peaceful place with a deep aquatic zone, with 15-23°C during the whole year. In order to create the ideal environment it's available to maintain water at 5.0-5.8 pH. A bottom composed of smooth stones, dry leaves and branches. Hiding places recommended. Outdoor large accomodation can be used in the summertime, better in a shadowy place.

FEEDING

Carnivorous: fish, molluscs and aquatic invertebrates. Accustoming it to worms and insects is advisable. It rarely eats aquatic plants. In order to avoid obesity do not overfeed it.

REPRODUCTION

From September to January it lays 2-3 elliptic eggs. They hatch after 130-170 days, at 22-25°C at 90% humidity. Recently successful hatchlings occurred in the Eastern Europe.

CURIOUS FEATURES

It's the rarest South American turtle both in nature and in captivity. Biological and morphological differences with *Hydromedusa tectifera* lead a brand new classification. Free sale is permitted but it's very expensive; in great demand among breeders for it's attractive apperance.



Close up of hatchling. The black colour of the carapace will be lost during the growth



Geoemyda spengleri

Gmelin, 1789 – Black-breasted Leaf Turtle



Geographic range



Geoemyda spengleri is a good climber.

DISTRIBUTION AND HABITAT

It lives in southern regions of China: Guangxi, Guangdong and Hunan; it can be seen in Hainan Island and Indochina.

Mountain zones with large forests, humid lands rich in vegetation, close to water basins where it lives in order to look for food.

SIZE

Small size: it reaches 13 cm; normally it doesn't grow over 10 cm.

HABITS

Semiterrestrial turtle, it spends most of the day firm and hidden. It's very intelligent and a good predator. It enters water for drinking. It doesn't tolerate bright light and high temperatures over 28°C for long periods; it suffers temperature changes.



Studies have shown that they can see live prey up to 20cm.



Carapace's colours can change, depending of the geographic range.

REST

Not in our climates. A short period of brumation is recommended at 10°C only for adapted and sturdy specimens in good health.

HUSBANDRY

In a large terrarium with temperature 20-25°C in the warmest zone. Humidity at 90%, peat and bog moss bottom, dry leaves, plants and hiding places. Shallow water zone. Outdoors only if temperatures are not too high. During summertime a fresh place is recommended at 28°C. In order to avoid stress it's suitable to keep the specimens separated.

FEEDING

Omnivorous; it loves living food in movement: snails, slugs, earthworms, Waxworms and other insects; occasionally ripe fruit. Varied diet is suitable but do not overfeed.

REPRODUCTION

Rare in captivity; 1 or 2 eggs every clutch with an incubation of 60-70 days at 26°C and a high humidity level. Babies need calcium in order to avoid malformations of the carapace and deformaties

CURIOUS FEATURES

Specimens come from capture in Vietnam, are hard to maintain in our climates. It's one of the species that protect its nest. Its mimetic colours and shape give it the name of Black-breasted Leaf Turtle. Not listed in CITES but considered as an endangered animal.



Typical position of healthy *Geoemyda spengleri*: watchful and corious eyes and extended neck are sign of good health.

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NORTH AMERICA

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