

# TRANSLATIONS

## *Editorial Introduction*

The following paper on turtles and tortoises in Albania was originally published in Albanian in 1985. The author documents the distribution of six species of Albanian chelonians, recording *Testudo marginata* from the country for the first time. The possible presence of *Testudo graeca* in Albania is also discussed. Natural history data for several species are presented, notably stomach contents analyses, habitat preferences, and reproductive data on *Mauremys caspica rivulata*, *Emys orbicularis*, and *Testudo hermanni*. Vernacular names and the commercial importance of the various species is also presented.

As a supplement to the translated 1985 article, the author also presents a separate update on the status of chelonians in Albania. He presents notes on current data on population status and habitat preferences of *Testudo hermanni* in various locations, while providing some new natural history observations.

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## Results of Studies on the Chelonians of Albania

IDRIZ HAXHIU<sup>1</sup>

<sup>1</sup>*Faculty of Natural Sciences, Zoology Department, University of Tirana, Tirana, Albania*

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Translation by JAMES R. BUSKIRK

Concerning the turtles and tortoises of Albania there are few publications by our own authors (Haxhiu, 1980, 1981; Zeko and Puzanov, 1960) or by foreign ones (Csiki, 1923; Gayda, 1940; Mertens and Wermuth, 1960). The purpose of our studies has been to indicate the variety of species extant in our country and their geographical distribution, the collection of more bioecological data and to point out which species are economically harmful or beneficial.

### MATERIALS AND METHODS

Actual material preserved in the science collection of the zoology department of the University of Tirana as well as bioecological data concerning the different species of chelonians were gathered by us during expeditions carried out in all regions of our country, between the years 1976–1983 (see Fig. 1). Within this framework we even made use of the cold season (Haxhiu, 1980). We also determined the densities of different species.

The materials here presented include six species of turtles, belonging to four families and five genera.

#### *Clemmys caspica rivulata* (Valenciennes, 1833)

[Ed. = *Mauremys caspica rivulata*]

Breshkë uji, breshkajze = water turtle

Materials: 35 males, 30 females and hundreds of observed specimens. The largest specimen has a length of 220 mm (Terent'ev and Chernov, 1949).

Of 27 stomach analyses carried out, in 18 cases fish had been eaten, amphibian larvae in five cases, while four stomachs were found to be empty.

It is found in streams, rivers, irrigation canals, drainage ditches, marshes, and waterholes as well as commercial fish farms. In regard to the latter, it appears harmful in that it consumes fish eggs. We have observed it often on land (at night) far from water. This species is distributed in the western lowlands, the Albanian Riviera and the Meso-Mediterranean climatic zone.

#### *Emys orbicularis* (Linnaeus, 1758)

Breshkë uji, breshkujzë, breshkujcë = water turtle

Materials: 36 males, 31 females and hundreds of observed specimens. The largest specimen has a length of 185 mm (Terent'ev and Chernov, 1949, give a record length of 220 mm). Of 23 stomach contents analyses, in eight cases fish had been eaten, amphibian larvae in seven, newts in six, plants in six cases, while one stomach was found to be empty. It appears harmful to fish cultivation. In the oviducts of six pond turtles in late May (28–29, 1977) from the Shëngjin Marsh and at Butrinti (25 May 1978) we found eggs (4–9 per clutch) while we observed one specimen (from Zejmen, 1 June 1979) laying eggs beneath a shrub (in soft earth about 60 m from the water).

This species is chiefly found in stagnant waters, marshes (Butrinti, Divjakë, Shëngjin, Velipojë), waterholes (Tropojë, Kukës, Korçë, etc.), reservoirs (Tiranë, Krutë, etc.), commercial fish farms (Ersekë, Sarandë, Kavajë, etc.) but seldom in flowing water; and in irrigation and drainage ditches (Vlorë, Fier, Lushnje, Durrës, Laç, etc.).

In the western lowlands, in places it has reached a high or average density, while on the Riviera (Sarandë), a low density. In the southeast (Korçë) the density has

been average, while very low in the northeast (Kukës and Tropojë).

It occurs in all regions of our country, in the Meso-Mediterranean, Upon-Mediterranean, and Oro-Mediterranean climatic zones.

***Testudo hermanni hermanni* (Gmelin, 1789)**

[Ed. = *Testudo hermanni boettgeri*]

Breshka e zakonshme e tokës = common land tortoise,  
breshkë = tortoise, breshkë toke = land tortoise, breshka  
e ugareve = fallow land tortoise

Materials: 40 males, 35 females and hundreds of observed specimens. The largest specimen has a length of 264 mm (Radovanovic, 1951, gives 250 mm as the record length).

From stomach analyses and observations in the wild, this tortoise feeds chiefly on plants (cultivated and wild) and

on fruit found with them: in 24 cases, plants of the family *Papilionaceae* (bean and green pea leaves and clover); in 19 cases, *Cucurbitaceae* (leaves and soggy fruit of watermelon and cucumbers); in three cases, *Convolvulaceae*, and two of *Rubiaceae*. Along with the leaves of plants, small land snail shells (*Gastropoda*) are found in the stomach; in the Kune forest (19 June 1978) 23 snails were found in one stomach. Additionally, we have observed about 20 cases of ripe fallen fruit being eaten (pear, fig, dogwood, mulberry, and blackberry).

Around Tirana, we have observed hibernation to commence at the end of November, while activity resumes at the beginning of March. We found three specimens (disturbed while opening up new land on Vorë hill in January) at a depth of about 20 cm. The literature (Haxhiu, 1981) emphasizes that it is very sensitive to cold, to which is linked both its becoming dormant and becoming active.

In the Albanian lowlands we have observed nesting and egg-laying during the month of May (1 case: 15 May 1982 at Vorë), and in the oviducts of 18 tortoises (analyzed at the beginning of June 1977, 1978, and 1979 at Kune) were found four to nine shelled eggs. In October of the years 1976, 1977, and 1978 in the hilly country around Tirana (Sauk, Selitë, Kashar, Bexullë, and Vorë) we have found hatchling tortoises whose shells were still soft. Nests containing eggs have been found opened in places with soft soil or with scant brush, in plowed fields, etc., mainly those exposed to the sun.

It is found in various types of habitat: in gardens and fields sown to vegetables and the hedges surrounding them, in places with sparse brush, in and around thickets, along streams and rivers, etc.

In some places this is the most common chelonian in Albania and we have found it in high and average densities (Tropojë and Kukës), especially in cut forests with oak scrub in the mountains of Shëngjin, Shupenzë, Mamurras, and Sauk, in the forests of Divjakë, Peshtan, Qafa e Këqok, Polenë, Vrinë, Bistricë, etc.

It is found in all regions of Albania, from the sea shore to an elevation of 1000 m, excluding zones with Oro-Mediterranean climate. As such it represents a species with economic importance (it may be used as food for human or domestic animal consumption).

***Testudo marginata* (Schoepff, 1792)**

Breshka malore = mountain tortoise

Materials: 6 males and 4 females. The largest specimen has a length of 310 mm (Schreiber, 1912 cites 300 mm as the record).

It occurs in stony scrub habitats (hills of Çuke, Ksamil, Butrinti, and Konispoli). It has a very restricted distribution in Albania. It is found only in the southwestern part of the Southern Mountain Region. The literature (Mertens and Wermuth, 1960, and Schreiber, 1912) states that it occurs only in Greece (as far north as Olympus) and on Sardinia.

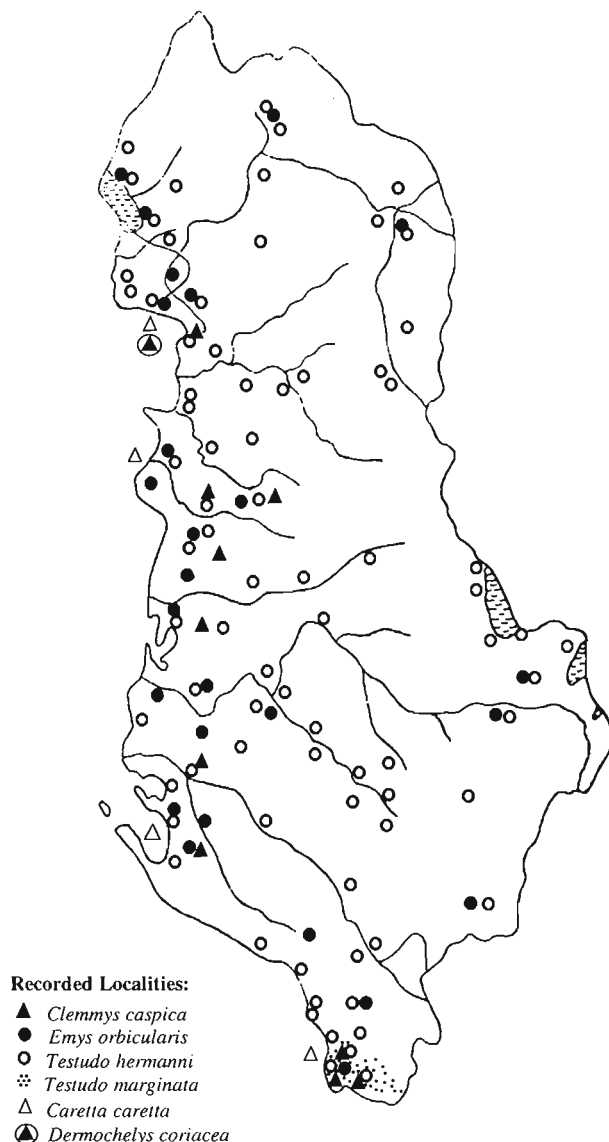


Figure 1. Map of Albania showing recorded chelonian localities.

The marginated tortoise, with its restricted range, represents a rare species; as such it signifies importance for our country and its fauna.

### *Testudo graeca iberica* (Pallas, 1814)

Materials: 2 females. Two specimens which we have collected within our territory exhibit those characteristics which belong to *T. graeca*: an undivided supracaudal plate; on the sides of the thighs there are large, prominent, horny tubercles (in comparison with surrounding scales). There are further inconsistencies: the tip of the tail has a nail; the interpectoral seam is not twice as small as the interfemoral. Insofar as the data are supportive with the small number of specimens in our collection, the status of this species remains doubtful, though leaning towards validating *T. graeca*.

### *Caretta caretta caretta* (Linnaeus, 1758)

Materials: 3 males and 1 female. The largest specimen has a length of 800 mm (1000 mm, Angel, 1946).

This marine turtle occurs in the Adriatic and Ionian Seas. From time to time it is caught in the nets of fishing vessels. We found two specimens (one at Kune and one at Curila) dead on the beach.

In the scientific collection of the Museum of Natural Sciences there is one specimen representing the largest species of turtle in Albania, *Dermochelys coriacea* (Linnaeus, 1758).

## CONCLUSION

Of the six species of chelonians defined herein, one (*T. marginata*) does not appear in the literature (Mertens and Wermuth, 1960; Schreiber, 1912) as belonging to the herpetofauna of our country. Supported by the material gathered and that closely observed in nature, the most common chelonian species are *T. hermanni* and *E. orbicularis*: conversely, *D. coriacea* and *T. marginata* have a very limited geographical distribution.

*Testudo hermanni* is an economically useful species for our country, whereas both the freshwater species may be harmful, though on a small scale, to commercial fish farms. *Testudo marginata* represents a rare species and as such is of scientific importance to the fauna of Albania.

## SUMMARY

In this article the results of studies on the turtles of Albania over the years 1976–1983 are presented. The article is an account of six species of turtles, one of which (*T. marginata*) is recorded for the first time for the herpetofauna of Albania. This work also presents bioecological data as well as the geographical distribution of the six Albanian species of chelonians.

Department of Zoology (Presented for editing, 24 April 1984).

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## Current Data on the Chelonians of Albania

IDRIZ HAXHIU<sup>1</sup>

<sup>1</sup>Faculty of Natural Sciences, Zoology Department,  
University of Tirana, Tirana, Albania

Further research carried out between 1985 and the present in many parts of Albania has led to a deeper understanding of the bioecology and ethology of its native chelonian species. A summary of these findings is presented here. Whereas all species as a group are ignored by wildlife authorities and seldom given a second thought by common people, both aquatic species *Emys orbicularis* and *Mauremys caspica* continue to be considered as pests by casual fishermen and commercial fisheries alike. With the recent increase of motor vehicles within Albania, we have found increasing numbers of hatchling and juvenile specimens crushed on roads.

*Testudo hermanni boettgeri* remains widespread in Albania and good populations persist in many regions, as indicated by their relative abundance and the presence of all size classes. The most important geographic regions for the species are as follows.

1. Shengjini Mountains near Lezha, where the dominant vegetation consists of broom (*Spartium junceum*), pomegranate (*Punica granatum*), bramble bush (*Palurus spinacristi*), dogwood (*Cornus mas*), hornbeam (*Carpinus orientalis*), and oaks (*Quercus pubescens*).