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POD@RCIS

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SCHNEIDER, B., 1981. *Algyroides fitzingeri* (Wiegmann, 1834) — Tyrrenische Kieleidechse. In: BÖHME, W. (ed.). Handbuch der Reptilien und Amphibien Europas. Band 1. Echsen I: 392-401. Akademische Verlagsgesellschaft, Wiesbaden.

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Voor Nederlandstalig colofon zie laatste bladzijde.

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Frontispiece: *Dolichophis caspius*.

Photo: J. Hofstra

Errata volume 7

- Pod@rcis 7 (2006), p. 24: *Euproctus asper*, Pyreneënbeeksalamander. [Not: Corsicaanse beeksalamander]
Pod@rcis 7 (2006), p. 26: *Emys orbicularis*, Europese moerasschildpad, Mega Derion, Greece. [Not: *Mauremys rivulata*, Balkanbeekschildpad]

An addition to the herpetofauna of the Greek island Lesbos

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Photos by the author unless otherwise indicated

INTRODUCTION

After the publication of my article concerning the herpetofauna on Lesbos (HOFSTRA, 2003), my wife and I continued to visit that same Greek island for four consecutive years.

Every year we stayed in the fishing village of Skala Kalloni in the same apartment and gradually got to know the best locations to look for reptiles and amphibians. In these five years, the islanders often said there was a heat wave. At high temperatures, 'our' animals do not often show themselves. In 2007, once again we visited during three terribly dry and warm weeks (May 18 - June 8), but our luck improved as there were a few rainy days. Probably as a result of these short wet periods, we found several species, which we had not seen in any of the previous years. Listed below are these species, additional notes on species I found

previously, and a checklist of the herp species of Lesbos.

Unless indicated otherwise, all observations were made at a maximum distance of 6-7 km from Skala Kalloni.

Eastern Spadefoot, *Pelobates syriacus*

EISELT (1988) reported *P. syriacus* from Lesbos (Filia, 230 m).

This species is secretive and strictly nocturnal. It is therefore easily missed during 'normal', i.e. diurnal, field trips.

Green Toad, *Pseudepidalea viridis*

Under the heading Green Frog in HOFSTRA (2003) I stated, "In a pond near a dump site we found thousands of recently metamorphosed little froglets". A closer look in the years thereafter under a magnifying glass showed these to be tiny Green Toads,

Pseudepidalea viridis. We were astonished to still find tadpoles, while at the same time thousands of animals had already metamorphosed. In hindsight my mistake is slightly comprehensible as we saw numerous Green Frogs, *Pelophylax bedriagae*, with about the same colour and pattern as the Green Toads, and both groups of small anurans "flew" away at an astonishingly rapid speed with each footprint. In 2007, thanks to the wet weather, I also found my first live adult *P. viridis* on the island. The females were somewhat larger than



When the *Pseudepidalea viridis* were put into the water, the male spontaneously clasped the female.

the males. The green patterning on the males was more faded and the green spots showed less defined limits. As well, the male's front legs were thicker. In total, I found six adults. When two animals were put into water to take a photograph, the male spontaneously clasped the female.

Balkan Terrapin, *Mauremys rivulata*

My earlier notes on *Mauremys rivulata* need some additions. Females of this turtle deposited 4-6 hard-scaled eggs in May/June. Since the incubation time at 28-30°C is approximately 60-70 days (pers. obs.), thus the young animals hatch in July/August. WISCHUF & BUSACK (2001) presented a single captive observation indicating an incubation time of approx. four months at temperatures between 25-32°C. To me this seems rather long, but may indicate the large variation in incubation

duration. This gives the turtles over two months to eat and grow on Lesbos before the colder season sets in. However, very young animals of approximately 2-3 cm length are frequently seen in May. According to experts, these would be the juveniles of the previous season. My captive-born animals of *Mauremys mutica* and *Mauremys*



This juvenile *Mauremys rivulata* from Lesbos clearly shows a fresh umbilical scar.

rivulata begin to have growth rings after a week (HOFSTRA, 1995). The young found on Lesbos are too small to be two months of age, and lacked growth rings. I wondered about this until I caught a small turtle in 2006. In this small animal the spot on the abdominal shield where the yolk sac is attached, was not yet entirely closed, proof that the animal was only a few days old. In addition, twice I found the remains of very recently hatched eggs of this turtle species. In my experience, eggs of *M. rivulata* are more elongated than those of *E. orbicularis* and thus distinguishable, although this might not always be so (cf. WISCHUF & BUSACK (2001: 101) and FRITZ (2001: 440-443)). Having bred the species myself, I was quite sure that the eggs had hatched naturally. When eggs have been dug up by a predator, one would expect to see markings of teeth or bills. It remains somewhat of a mystery how the eggshells

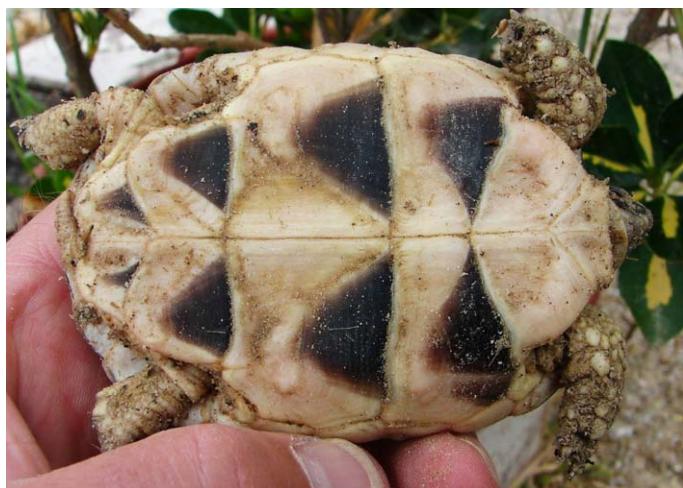
ended up on the soil surface, although I suspect the young turtles themselves were responsible. Sometimes the eggshell adheres for a longer period to the juvenile that has managed to crawl to the surface with just one or two legs free.

Marginated Tortoise, *Testudo marginata*

In the Lesbian Wildlife Hospital, for a number of years, young were born that were hybrids, i.e. crosses between a female *Testudo marginata* and a male *Testudo graeca ibera*. Initially, the hospital's intention was to release the hybrids on the island. We got in touch with the administrators of the Lesbian Wildlife Hospital and suggested such a release was not a good idea (HOFSTRA, 2003), and tried to ensure that no more offspring had been hatched of this hybridisation. We were successful on both



The eggshells of *Mauremys rivulata* that we found in May 2007.



The triangular spots on the plastron confirm that this tortoise is probably a pure *Testudo marginata*.

counts. In 2006 we got a message that the first pure Marginated Tortoise had been hatched at the hospital, since a male *Testudo marginata* had been brought in, hailing from the island of Paros. In 2007 we admired the resulting single young tortoise. Given the triangular dark spots on the laminae of the plastron, it is apparently not a hybrid, but a pure *Testudo marginata*.

Worm Snake, *Typhlops vermicularis*

In 2007 we finally found our first *Typhlops vermicularis*. This animal lives mainly underground, in open areas with scattered stones. The species can be found by turning stones.



Typhlops vermicularis.

In summer, these snakes hide deeper in the ground. Probably because of the rain showers, when we were turning stones we found numerous yellow-brown scorpions and six worm snakes. On a later evening, another specimen was discovered under the gleam of a lantern. Two dead traffic victims were also encountered.

This snake can reach a length of approximately 35 cm. The end of the tail is thicker than the head. The largest animals found by us had a length of 29 cm. The eyes of this species are very small, rudimentary, and covered with scales. Because of this, *T. vermicularis* depends on sense of smell rather than sight to find food. Their diet consists mainly of ants and ant pupae. In May and June the female, which is indistinguishable from the male, lays approximately 6-7 eggs with a length of approximately 11 mm (ARNOLD & OVENDEN, 2002).



The eyes of *Typhlops vermicularis* are rudimentary and covered with scales.

Javelin Sand Boa, *Eryx jaculus*

Eryx jaculus inhabits the same biotope as the worm snake. Again, probably because of the rain in 2007, this snake was seen above ground. The first *Eryx jaculus* that we saw was a dead specimen, which was found by tourists close to Kalloni Lake. By turning innumerable rocks, we eventually found three animals. They had a length of approximately 30 cm, although according to the literature they can reach lengths of up to 80 cm (TOKAR & OBST, 1993). The snake



Several *Eryx jaculus* came to the surface in 2007, presumably because of the rain.

has a short, obtuse tail, no clear dissidence between head and body and very small eyes with a vertical pupil. The snout has somewhat of an overbite and could be said to have the form of a chisel. The snake feeds mainly on small rodents, but also on lizards and sometimes even snails. Larger prey animals are strangled firstly. The species gives birth to live young, varying in number from 6-18, and possibly more (ARNOLD & OVENDEN, 2002). ARNOLD & OVENDEN (2002) indicated that sand boas can be found during dusk and at night above ground and that they seem to be fairly fast moving. During the day in the warmer season, the species is usually only found if it is ploughed up from the ground, or by turning rocks. It may also be diurnal and seen on open ground during spring and autumn, see TOKAR & OBST (1993) who previously reported the species from Lesbos.

Hemorrhois nummifer.

Photo: J. Speybroeck

Coin-marked Snake, *Hemorrhois nummifer*

In 2007 I photographed an initially unidentified snake. Probably as a result of being scared by us, the animal rapidly crawled into a dry stone wall. We hardly saw anything of the body. Suddenly, the animal stuck out its head from between the stones, which gave me the opportunity to take one photograph. The head was immediately withdrawn, and that was it. The exact local-





The head of the observed *Hemorrhois nummifer*.

ity is indicated on the map.

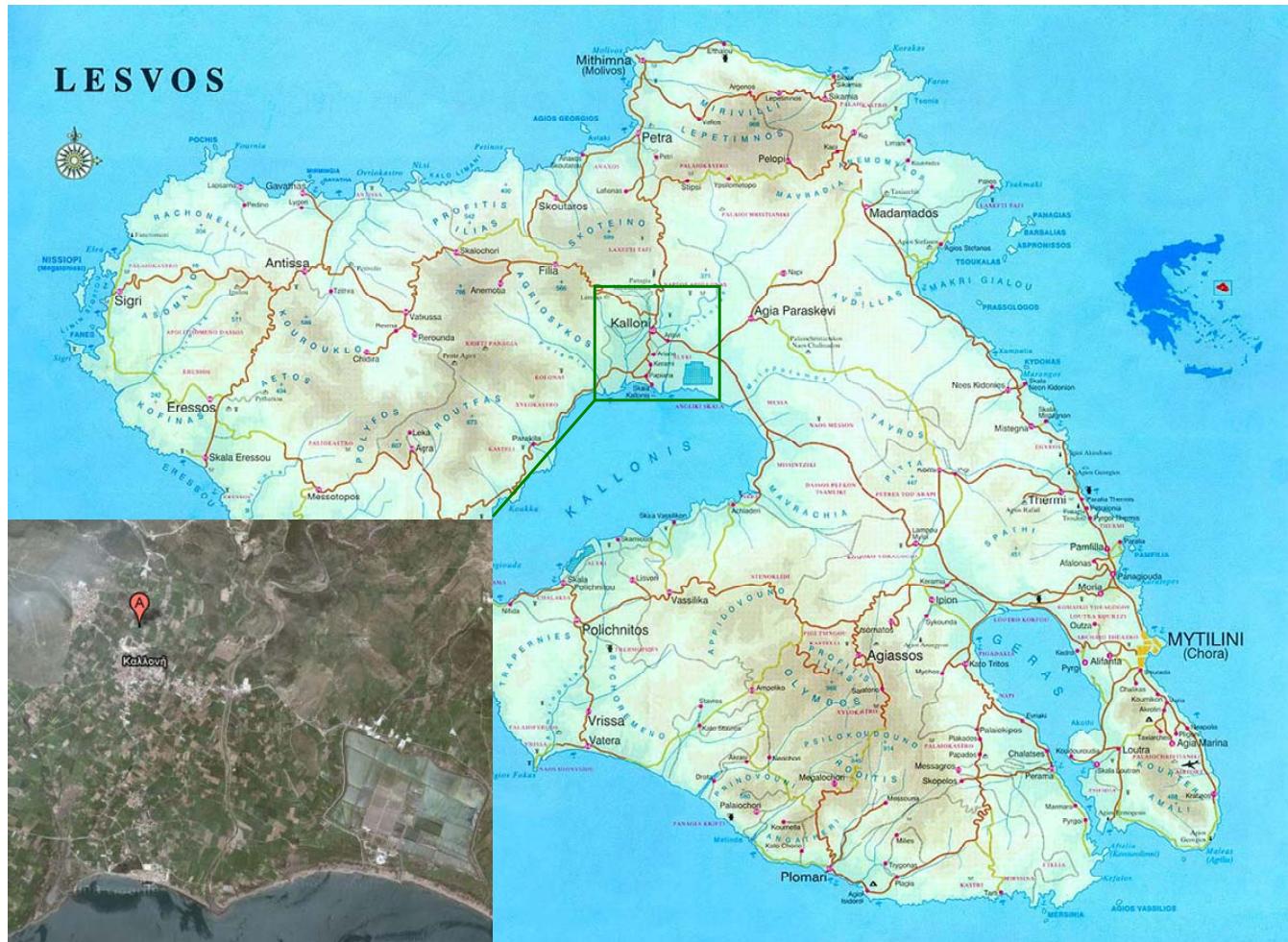
After consulting a number of people more knowledgeable about snakes than I, the snake was identified as a Coin-marked Snake, *Hemorrhois nummifer* (Reuss, 1834), a species which had not been previously observed on Lesbos. It has been recorded, however, from the more southerly

located Greek islands of Rhodes (WETTSTEIN 1953), Kos (LOTZE, 1977), and Kallymnos (SCHNEIDER, 1983). ARNOLD & OVENDEEN (2002) also listed Leros and Symi, and gave Asiatic Turkey, Cyprus, southwest and central Asia, and northeast Egypt as the range.

Andi Meyer (pers. comm. to David Buttle, 1998) observed this species on the more northerly lying Samos in 1997 in late November. He found roadkill juvenile specimens, one adult, and an adult specimen that was killed by locals. *H. nummifer* was found only in the south-central part of the island around the villages of Spatharei, Pagondas and Myli, and only during that late-in-the year trip at the end of 1997. Andi Meyer was unable to find this species during other excursions on Samos at a 'better' time of the year, or in other parts of the island.

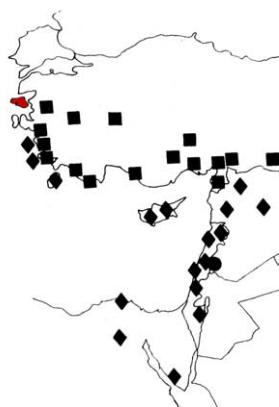
The symbol indicates the locality of the *Hemorrhois nummifer* find.

From: <http://www.lesvos-island.eu/?p=68>
and Google Maps



The Coin-marked Snake reaches up to about 100 cm total length, is dorsally coloured brown, grey or olive grey, and often has a row of about 60 large, rounded dark spots, which give it its English name. The pupil is round, the head often with a dark bar between the eyes and irregular marking on the back of the head. The tail is longitudinally striped. For further habitus details refer to the picture on page 5, taken on the more southerly Symi (see ANONYMUS, n.d.) and provided by Jeroen Speybroeck.

The snake lives in dry rocky, sunny places with bushy vegetation. Food ranges from small birds to lizards and mammals. Prey is strangled.



In the past the species has been frequently confused with the closely related *Hemorrhois ravergerieri* (for overview see SCHÄTTI & AGASIAN, 1985) and also considered as a subspecies of that form – '*Coluber ravergerieri nummifer*'. The genus *Hemorrhois* includes only four species that form two distinct groups based on geographic distribution. A western group is composed of *H. hippocrepis* of North Africa, the Iberian Peninsula and a number of Mediterranean islands, and *H. algirus*, which also inhabits North Africa and some Mediterranean islands. Geographically well separated from this sister species pair is the eastern group consisting of the closely related *H. ravergerieri* and *H. nummifer*.

These two species inhabit Central Asia, largely in sympatry (NAGY et al., 2004). For distribution maps of *H. nummifer* and *H. ravergerieri* see SINDACO et al. (2000).

Leopard Snake, *Zamenis situla*

Arriving at our apartment at night (in 2007) we found a plastic bag hanging on the doorknob with a note: Take care! Leopard snake! Indeed, it contained a shiny, but unfortunately dead, *Zamenis situla*. A traffic victim, the snake had a total length of approximately 44 cm. It was found by tourists close to the convent of Metochi.

The Leopard Snake is undoubtedly the most beautiful snake on the island of Lesbos. With its red, brown and black outlined spots (leopard spots) on the back, it is a very striking animal. The length of this snake varies between 70-90 cm. On rare

Distribution pattern of *Hemorrhois nummifer* (adapted from SCHÄTTI & AGASIAN, 1985: fig. 2) in Asia Minor and the Near East. (Squares and lozenges denote two different *H. nummifer* types, the circle shows *H. ravergerieri*.) Lesbos is indicated in red.



Zamenis situla is, without a doubt, the most beautiful snake of Lesbos.

occasions it can grow to 100 cm (ARNOLD & OVDENEN, 2002).

The females grow somewhat larger than the males. During mating, which can last for several hours, the females are bitten on the neck by the males. This oviparous snake, which lays eggs every other year, is active by day and lives in numerous biotopes,

such as roadsides, farmlands, and stone walls. The animal frequently lives close to people and is found in gardens, old barns and even in houses. The Leopard Snake feeds on small rodents, young nest birds and lizards, and kills by constricting.

Because of its hidden lifestyle, the chance of meeting a live specimen is small. However, in 2006 someone from our apartment told us that she had seen a splendidly red-brown spotted snake on an excursion to Mitilini, the capital.

KASAPIDIS et al. (1996) considered *Z. situla* to be the most common snake on the island of Lesbos.

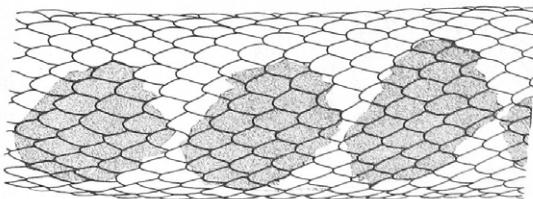
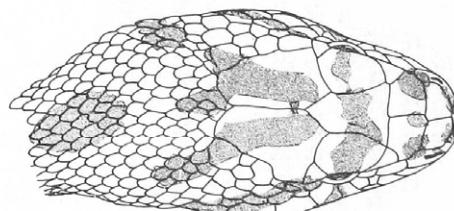
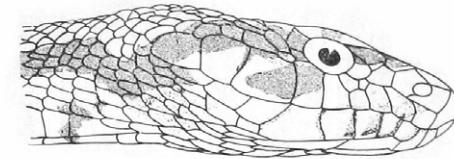
DISCUSSION

The really exciting find was the specimen of *Hemorrhois nummifer* as it was new for this island. This discovery is geographically understandable because the species occurs on the Turkish mainland, which is relatively close at a distance of approximately 15 km (see figure adapted from SCHÄTTI & AGASIAN, 1985). *H. nummifer* also occurs on several Greek islands (see e.g. ANONYMUS (n.d.) for Symi, or ARNOLD & OVENDEN (2002) who mentioned islands in the south-eastern Aegean Sea: Leros, Kalymnos, Kos, Symi, and Rhodes). Further research must make clear if there is really a population on Lesbos or if my single find is an introduced specimen.

On Lesbos I found not only hatchling *M. rivulata* in spring, but also very young *E. orbicularis*. This is not unique to the island, but is also known from elsewhere in Greece: ADEMA & IN DEN BOSCH (1980) reported the find of a tiny *E. orbicularis* with a clearly visible umbilical scar on May 14, 1980, 12 km SE of Alexandria, Macedonia, Greece. It is impossible to decide whether these are cases of diapause (delayed development or postponed hatching), or juveniles hibernating in the nest chamber without further research. WERMUTH (1957)

Table 1. Checklist of the amphibians and reptiles known to occur on Lesbos. An asterisk (*) denotes those species that were recorded on the island by the author.

Species
<i>Pelobates syriacus</i>
<i>Bufo bufo</i>
<i>Pseudepidalea viridis</i> *
<i>Hyla arborea</i> *
<i>Pelophylax bedriagae</i> *



Hemorrhois nummifer from Izmir (adapted from SCHÄTTI & AGASIAN, 1985: fig. 3).

appeared to be in favour of the first explanation for *E. orbicularis*. The other rationalisation, that eggs were laid in the beginning of March, seems quite improbable because of the low temperatures.

Table 1 summarises the 26 herpetological species now known from Lesbos, 5 amphib-

<i>Emys orbicularis</i> *
<i>Mauremys rivulata</i> *
<i>Testudo graeca</i> *
<i>Testudo marginata</i> *
<i>Laudakia stellio</i> *
<i>Hemidactylus turcicus</i> *
<i>Mediodactylus kotschyi</i>
<i>Lacerta trilineata</i> *
<i>Ophisops elegans</i> *
<i>Ablepharus kitaibelii</i>
<i>Pseudopus apodus</i> *
<i>Typhlops vermicularis</i> *
<i>Eryx jaculus</i> *
<i>Malpolon insignitus</i> *
<i>Dolichophis caspius</i> *
<i>Hemorrhois nummifer</i> *
<i>Zamenis situla</i> *
<i>Eirenis modestus</i>
<i>Natrix natrix</i> *
<i>Natrix tessellata</i> *
<i>Montivipera xanthina</i> *

ian and 21 reptile. KASAPIDIS (1996) already surmised, because of their occurrence on neighbouring islands, that *Anatololacerta danfordi* (on Samos) and *Chamaeleo chamaeleon* (Chios, Samos) could be expected on Lesbos. Similarly, various other Turkish forms might materialise on the island in the future.

Two species of marine turtles, *Caretta caretta* and *Dermochelys coriacea*, live in the Aegean Sea whereas *Chelonia mydas* occurs and breeds further to the southeast in the Mediterranean Sea. Rarely *D. coriacea* is recorded in the eastern part of the Aegean (CASALE et al., 2003). These species might thus end up on Lesbian shores.



Several rainy days in 2007 probably increased our chances of finding more species.

SUMMARY

For the first time, *Hemorrhois nummifer* is reported on Lesbos. Based on a recently hatched juvenile and egg remnants, it is suggested that at least some *Mauremys rivulata* eggs go into diapause and hatch in May of the following year. Because of wetter weather, we found more species than on previous visits. A checklist of herpetological species present on Lesbos is given.

SAMENVATTING

Hemorrhois nummifer wordt voor de eerste maal gemeld op het eiland Lesbos. Aan de hand van een zeer recent uitgekomen jong in het voorjaar, tezamen met vondsten van restanten van eischalen, wordt het vermoeden geuit dat tenminste sommige *Mauremys rivulata*eieren na de leg in diapauze gaan en pas in mei van het volgende jaar uitkomen. Waarschijnlijk dankzij het nattere



Habitat in which *Hemorrhois nummifer* was found.

weer, vonden we meer soorten in 2007 dan in de voorgaande jaren. Aan de hand van eigen waarnemingen en literatuur, is een herpetologische soortenlijst samengesteld.

ACKNOWLEDGEMENTS

I thank Henk Strijbosch for identifying *Zamenis situla* from a slide. The paper on the Balkan *Pelobates* was pointed out to me by Herman in den Bosch, who also improved the text of this article significantly. I am grateful to Beat Schätti who confirmed the identity of the snake on my picture as *Hemorrhois nummifer* and for permitting me to use part of his published distribution map. Information by Henrik Bringsøe, David Buttle, Andi Meyer, and Jeroen Speybroeck is appreciated, the latter is also thanked for the use of a photo.



Hemidactylus turcicus.

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Post-mortem amplexus with a marauded *Bufo bufo* (Linnaeus, 1758)

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Photos by the author

SHORT NOTE

During the monitoring of amphibian reproduction in Gandaras de Budío e Ribeiras do Louro wetland (NW Spain), remains of several dead Common Toads, *Bufo bufo*, were found. These remains, described by AYRES & GARCIA (2007), were predated upon by otters (*Lutra lutra*). On January 18, 2008 one dead female Common Toad was found in shallow water, near the bank of a clay pit that the *B. bufo* use for oviposition. The body was partially consumed, mainly the hind limbs, which were skinned: the predator avoided eating the eggs that were clearly visible. This pattern of consumption, steering clear of toxic elements, was described as an adaptive behaviour by SLATER (2002).

The most interesting fact in this case was that the dead body had three males attached, all trying to grasp onto the remains of the female. We brought this aggregation to the shore to photograph it, which caused the males to leave the body and return to the water. But, as soon as the dead body



The habitat where the observations on the post-mortem amplexus were made.

was returned to the water, two males again began to fight to get a grasp on the trunk of the dead female.

It seems that some kind of water-based chemical communication is involved in this behaviour, because the males lost their interest when the female was on the shore, but grasped the body of the female when it was returned to the water. On January 20, i.e. 48 hours later, there was still a male attached to the female remains floating in the clay pit. Evidence suggests that chemical cues can be important in the male choice of some amphibians (MARCO et al., 1998a; POSCHADEL et al., 2007). In some toads chemical cues are important for homing behaviour and orientation (TRACY & DOLE, 1969), and also for social communication (WALDMAN & BISHOP, 2004), but it is not clear if these play an important role in mating; I am interested in developing an experimental approach to evaluate such a hypothesis.

Interspecific mating attempts, or even mating attempts with inanimate objects, are well-known (e.g. EIBL-EIBESFELDT, 1950; DAVIES & HALLIDAY, 1979; READING, 1984;



Bufo bufo in amplexus photographed on land.

LIZANA, 1990; MARCO et al., 1998b). In Central Spain *B. bufo* has been seen in amplexus with dead male or dead female Common Toads (LIZANA, 1990). The latter author cited episodes involving multiple males in an amplexus that caused drowning of females, and also *B. bufo* males clinging to *Rana perezi*, *Salamandra salamandra*, *Bufo calamita*, dead fish or even pieces of wood. Prolonged amplexus with non-conspecifics can cause the death of the animals clasped (LIZANA, 1990). It could be that such aberrant behaviour is caused by the lack of release calls from the mating pairs (MARCO & LIZANA, 2002).

In Galicia mixed mating pairs of *B. bufo* and *R. perezi* are found occasionally (Ayres, unpubl. data; Garcia-Ferreira, pers. comm.), and sometimes dead female toads are found presumed to be mating casualties, but this seems to be the first time that an amplexus with a female that has been marauded by otters is described.



Bufo bufo in amplexus in the water as described.

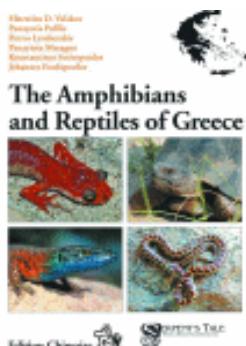
ACKNOWLEDGEMENTS

David Bird provided information about interspecific matings, Pablo Garcia helped with references about *B. bufo* behaviour, Francisco Javier Diego and Jens Poschadel gave me interesting advice about chemical communication.

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Book review



VALAKOS, E.D., P. PAFILIS, K. SOTIROPOULOS, P. LYMBERAKIS, P. MARAGOU & J. FOUFOPOULOS, 2008. *The amphibians and reptiles of Greece*. Edition Chimaira, Frankfurt.
463 pages, 413 colour photos, 4 b/w photos, distribution maps, hard cover
ISBN 978-3-89973-461-4
Price: €49.80

Photos by the author

There are not many books devoted specifically to the herpetofauna of Greece, although one in German was published last year (TRAPP, 2007). Since I have a keen interest in that particular subject, I found the new book, *The Amphibians and Reptiles of Greece*, a very promising title.

This book is written by six Greek herpetologists, most of them representing the younger generation. Being more or less 'surrounded' by the rich Greek herpetofauna, they had excellent opportunities to study the amphibians and reptiles in detail and to communicate some of their results in this work.

The authors start out with a very brief introduction to the geography and climate of Greece, and continue with a few hints on finding reptiles. These hints focus primarily on selecting an altitude with the right climate that should be neither too warm nor too cold. The section about the geography might be a bit too complex and also confusing for those who do not speak Greek. Firstly, spelling can be challenging because of the Greek alphabet (which is, in my opinion, not that hard to learn). The potential for puzzlement may be illustrated in the authors' denotation of the second largest island of Greece on two physical and political maps (figs. 1-2) as "Evvoia (Euboea)". It is fair enough that they show us two different spellings of this important Aegean island. However, throughout the text of the book the authors inconsistently use three spellings: Evia, Euboea and Euboia. You cannot blame the authors for the extremely variable spelling of geographical units in that country. Nonetheless, I find it incomprehensible that four different spellings of one island are found in this book and they

are never properly correlated for the reader. Moreover, it is striking that a fifth spelling, though apparently not used in this book, is very common: Evvia.

Secondly, the division of Greece into regions was changed about two decades ago and it would have been appropriate to have our Greek colleagues explain and define these properly. Instead the six authors further confuse the reader. When it comes to larger geographical units, a novel system of thirteen major peripheries was implemented in 1987 as shown on the political map (fig. 2). Peripheries are official regional administrative divisions of Greece. They subdivide into 51 prefectures or *nomoi* (singular *nomos*), which have been commonly used for many years. The two general maps of *The Amphibians and Reptiles of Greece* do not present the prefectures, although to a great extent prefectures are mentioned in the text, for instance Attica and Evros. These *nomoi* should certainly have been presented on a proper chart. To be quite honest, I find all of these errors and omissions relating to the geography of Greece to be slovenly work.

In the next chapter, five overall habitat types are briefly described, based mostly on altitude. This brief chapter is very useful. Many pages in this chapter are devoted to habitat and/or landscape photos. Generally, I find habitat pictures useful to supplement good descriptions in the text. Additionally, the habitat photos in the book remind me of the pleasant memories I have of my field trips in Greece. In spite of this, for the purpose of a herpetological book, nearly half of them (17 out of 40) have very limited value to the reader as there is no mention of

species or of the herpetological communities occurring in these habitats. In addition, these photos are not referred to in the text. One extreme example is fig. 16, which is accompanied by the following text: "Salt-pans (like these on Milos Island) host an impressive reptile biodiversity". But which reptile species live in this salt-pan habitat? There is no indication of what reptiles form part of this impressive biodiversity. Moreover, two landscape photos (figs. 4 and 7) are blurred and should have been discarded.

The next three chapters deal with biogeography, conservation, and amphibians and reptiles in Greek culture. It is very appropriate that the authors emphasise the serious problems caused to numerous natural habitats in coastal zones by mass tourism – either through direct habitat destruction from so-called development projects (hotels and other buildings), or drainage issues resulting from excessive freshwater consumption. However, a few well-chosen words in a book will not affect this tragic development. I really hope that our Greek colleagues will use the only effective tool, i.e. present cases to the European Commission, highlighting several violations of the EU Natural Habitats Directive, for which the Greek government should be held responsible.

Although much space in the individual species accounts has been dedicated to informing us about the conservation status of each species, the legal implications of this status have not been dealt with in any way. More than half of the Greek amphibian and reptile species enjoy the strictest protection, the Annex IV status under the Habitats Directive. It is extremely important to

keep in mind that this includes habitat protection! I would postulate that the majority of amphibian and reptile habitats in Greece are covered, since several widely distributed species occurring in very diverse habitats have been Annex IV listed, e.g. *Hyla arborea*, *Rana graeca*, *Triturus carnifex*, *Triturus karelinii*, all five terrestrial and freshwater chelonians, *Pseudopus apodus*, *Lacerta trilineata*, *Lacerta viridis*, *Podarcis erhardii*, *Podarcis muralis*, *Podarcis peloponnesiaca*, *Podarcis taurica*, *Natrix tessellata*, *Platyceps najadum*, *Telescopus fallax*, and *Zamenis situla*.

It is often beneficial to treat national authorities and local landowners with much respect, but from experience I know that the best results, when rules are not adhered to, are achieved by properly using legal methods. So far, the European Commission has carried out very few cases against Greece. In two cases the European Court of Justice has announced judgement against the Greek Government for failing to fulfil their obligations to implement effective and strict protection for *Caretta caretta* on Zakynthos (Case C-103/00 from 2002), and for failing to establish and implement a strict protection system for *Macrovipera schweizeri* on Milos (case C-518/04 from 2006). I very much hope that herpetologists and NGO's in Greece are involved or will become involved in actively protecting the nature and wildlife via the Habitats Directive.

The conservation statuses given in the species accounts are faulty. For each species the very essential Annex IV status has been provided, however, for eleven Annex IV species that status has not been mentioned: *Caretta caretta*, *Chelonia mydas*, *Dermochelys coriacea*, *Mediodactylus* (or



Lacerta trilineata, unstriped juvenile, near Kefalari (NE Peloponnese).

Cyrtopodion) kotschy, *Eryx jaculus*, *Dolichophis caspius*, *Eirenis modestus*, *Hierophis viridiflavus*, *Zamenis longissimus*, *Zamenis situla*, and *Vipera ammodytes*.

After these introductory chapters, we come to the bulk of the book, i.e. the parts dealing with the individual species. Identification keys to adult amphibians, amphibian eggs and larvae, and reptiles are provided. One striking mistake is the omission of *Rana temporaria*, even though this relatively new member of the Greek herpetofauna has been included in the species accounts.

In recent years taxonomy and nomenclature of numerous groups of amphibians and reptiles have frequently been reviewed and discussed. It does not really make sense to claim which proposed phylogenies are 'right', and which are 'wrong' at this stage. In general, the authors have chosen novel nomenclatural arrangements that I fully respect. However, it might be prudent to use the new name *Lithobates catesbeianus* instead of *Rana catesbeiana* for the American Bullfrog. The lacertid revision by ARNOLD et al. (2007) was apparently published too late for their generic re-assignments to be taken into consideration. ARNOLD et al. (2007) proposed the genera *Hellenolacerta* for *Lacerta graeca*, and *Anatololacerta* for *Lacerta anatolica* and *Lacerta oertzeni*. I think the gender of the genus *Podarcis* is still subject to discussion as briefly touched upon by ARNOLD et al. (2007), who advocated the feminine gender, which is in line with the choice made in this book.

As the six Greek authors have adopted the novel generic names for several colubrid species, they have changed the suffix of *situla* to *situs* because the genus *Zamenis* is masculine. Unfortunately that is incorrect since *situla* is a noun that is not inflected. As well, the six authors are guilty of inconsistency regarding this taxon, as the name *Zamenis situla* is used several times throughout the book.

Generally, I find the layout of the species accounts attractive. The utilisation of space is poor as there are many blank spaces at the end of the individual accounts - some 30-35 pages have been wasted! Moreover, there are many factual errors and important information is missing. Superficiality and inaccurate information are also problematic.

Below, I have included a description of several examples of these errors.

- The defensive posture of *Bombina bombina* and *Bombina variegata*, the well-known unken reflex, is described in a peculiar way: "It turns on its back flashing its bright belly, while covering its eyes with its palms (pp. 87 and 91). It is rare indeed that they turn themselves fully upside down: these species usually do not 'turn on their back', but almost always remain on their bellies while arching the back with the head and posterior part of the body elevated to display their brilliantly coloured undersides. Actually, this behaviour is nicely illustrated in the book (figs. 70 and 74), but the description is inaccurate.
- Six species of the genus *Pelophylax* ('Green Frogs') have been included. They are morphologically very similar, although the three species of the Aegean islands are truly allopatric and thus there is actually no doubt about their identity in the field. Nevertheless, the



Pelophylax kurtmuelleri (Strofilia Forest, NW Peloponnese).

text indicates that there are certain differences in their advertisement calls but there is no further description or illustration of these calls. Particularly in western Greece, where *Pelophylax kurtmuelleri* and *Pelophylax epeirooticus* are sympatric, it is very useful to know their calls (that of *P. epeirooticus* consists of a long series of very brief pulses, which makes it somewhat 'rattling' as compared to that of *P. kurtmuelleri*, which consists of pulse groups and is more 'ridibundus-like' and perhaps more me-

- Iodic). By the way, the original name of *Pelophylax epeirooticus* is not *Rana epeirooticus*, but *Rana epeirotica* (mentioned as a synonym of *P. epeirooticus* on p. 110).
- Another difficult ranid assemblage is the group of the Brown Frogs. We find three species in Greece: *Rana dalmatina*, *Rana graeca*, and *Rana temporaria*. Not only has *R. temporaria* been omitted from the identification key (see above), but the description is also very superficial. Important characters like the facial mask and the size and form of the metatarsal tubercle are not mentioned, which may increase the risk of confusing this
 - To distinguish *Anguis cephalonica* from *Anguis fragilis*, the wavy line on the neck of the former is a good character. It is very easy to use in the field with only a few exceptions known. But that character is ignored in the book, as only the well-defined borders between the different ground colours have been mentioned.
 - There is simply way too much incorrect information about *Chamaeleo africanus* in this book. The indicated total body length is too low, the information on coloration is misleading (bright blue/yellow is only seen in undisturbed pregnant females), inaccurate information about



Anguis cephalonica (Mani peninsula, South Peloponnese). The wavy line on the neck is generally a good character to distinguish this species from *A. fragilis*.

- species with *R. dalmatina*. I have the impression that the authors do not have any experience with this species as it is newly registered in Greece.
- For *Testudo marginata*, a particularly important and unique character has been ignored, possibly due to the authors' lack of experience with tortoises: The triangular dark spots on the plastron, which are symmetrical around the plastral mid-line. If one uses the flaring posterior carapace margin as a diagnostic character, as recommended in the book, you may mis-identify large individuals of *T. graeca* as *T. marginata*. This already happens regularly and regrettably.
 - ground level activity (males move over the ground in search for females, and females bury their eggs), the breeding season does not start in July but in August, the number of eggs per clutch is not 15-40 but an average of 40, the eggs are not laid on soft substrate but *in* the substrate (to a depth of approx. 35 cm), and the eggs do not hatch after eight months, but after approximately eleven months. The brief comment "No special measures exist for the conservation of this species" followed by a recommendation for urgent conservation management of the small Peloponnesian population is inappropriate considering the efforts to protect its tiny habi-



Young *Chamaeleo africanus*, photographed in early morning when everything, including the chameleon, is still covered in dew.

tat that have been headed by the Hellenic Ornithological Society. Up to fifty helpers per year participate in different ways, including protecting nests, and this project has been running for eleven years. Much better information on *C. africanus* can be found in the book by TRAPP (2007). There are several herpetologists – Greek as well as foreign – with a fine knowledge of *C. africanus* in Greece. Why were they not consulted by the authors of this book?

- The generic name of Kotschy's Gecko has changed often; the authors use *Cryptopodion kotschi*. But nowadays there is general consent for using *Mediodactylus* as the genus name (MACEY et al., 2000; SPEYBROECK & CROCHET, 2007).
- The two Greek species of the genus *Algyroides*, *Algyroides moreoticus* and *Algyroides nigropunctatus*, are known for a unique reproductive behaviour: the male performs a post-copulatory bite on the female for a very long duration. It was first demonstrated by IN DEN BOSCH (1983, 1985) in captivity and later described based on field observations. Although a few comments on reproduction in *A. moreoticus* and *A. nigropunctatus* are provided in the book, they are very superficial, which is unnecessary as good information is available. This ap-

plies to the reproduction of many other lizards discussed in this book and is a pity.

- On p. 254 there are two photos of green lizards, allegedly "*Lacerta agilis bosnica* gravid female" and "*Lacerta agilis*" respectively. Both are definitely females, but they look very different from Greek *L. agilis* or other *L. a. bosnica*. I will judge them as *L. viridis*. However, I am aware that, e.g. female *Lacerta agilis grusinica* from Georgia may be similar to *L. viridis* (BISCHOFF, 1988; IN DEN BOSCH & BISCHOFF, 2004) although it would have been very inappropriate to include that subspecies.
- Another strange mistake has been made for two other green lizard photos. Figs. 269-270 on p. 279 are claimed to depict *L. viridis meridionalis* from the Gulf of Amvrakia. However, according to the photographer Johannes Hill (pers. comm.) these two individuals are not Greek, but are from Lower Austria. Additionally, the subspecies *L. v. meridionalis* does not occur in that area (western Greece), but it has a north-eastern distribution in Greece.
- It is noted under Identification that young and subadult *L. trilineata* have "3-5 light streaks on the back" whereas young and subadult *L. viridis* have 2 or 4 light stripes. The wording "3-5" for *L. trilineata* is unfortunate and should have been "3 or 5" as that species will never have 4 stripes. If juveniles are striped, this character is indeed excellent for use in distinguishing the two species (odd number in *L. trilineata*, even number in *L. viridis*), however, juveniles of both species may very well be unstriped.
- In areas of sympatry, *L. trilineata* and *L. viridis* are easily confused and it would have been useful if more attention had been paid to the differences between the two species. A character which is easily used in the field is the ground colour of the skin between the scales of the body: In *L. trilineata* it is dark and in *L. viridis* it is generally light (NETTMANN & RYKENA, 1984a, 1984b). If you keep a wild adult in your hands, it will twist its body fiercely in an attempt to escape and then this ground colour will become exposed.

- Figure 271 is a close-up photo of *Po-darcis erhardii* with this text: “The nasal scale does not reach the nostril in *Po-darcis erhardii*, as shown in this specimen.” Firstly, this is a *contradiccio in terminis* as the nasal by definition is a scale recognised by the presence of the external naris! Secondly, I cannot distinguish scales properly in this picture. It is likely that the authors have been referring to the rostral that is excluded from the nostril.
- One photo of *L. trilineata* on p. 273 has apparently been turned 90 degrees – at least the lizard looks strange in that position!
- The authors have apparently misunderstood the taxonomic history of the two Greek members of the current whip snake genus *Dolichophis* as they write: “In the past *Dolichophis jugularis* was considered a subspecies of *D. caspius*” (p. 348). However, it was the opposite with the former genus name *Coluber* as *caspius* was actually a subspecies of the species *C. jugularis*, i.e. *Coluber jugularis caspius* and *Coluber jugularis jugularis*.
- *Vipera berus*: Five photos of this rather atypical member of the Greek herpetofauna are in the book (including one under habitat and landscape photos). Among these are individuals with a zig-zag pattern and one that is nearly melanistic. The latter is from Bosnia and I presume that the former is also extra-limital. I have never seen or heard of such patterns in individuals from Greece as these normally have a dorsal pattern of basically dark transverse bars. Since there are many good photos of Greek *V. berus* (including one in the book), it is superfluous or even inappropriate to include individuals from other parts of its distribution.
- Under Identification of *V. berus* we read that “the eyes separated by a single row of small scales”. Separated from each other? Or separated from what? The only row of small scales in contact with the eye that I can think of, are the suboculars (which separate the eye from the labials). Often there is indeed just a single row of suboculars, but that applies especially to the nominate sub-



Post-copulatory bite in *Algyrodes moreoticus* (April 23, 1995 near Souli, NE Peloponnese).

species, whereas the Balkan populations (*V. berus bosniensis*, which is known from Greece) usually has two rows of suboculars. The distribution map of *V. berus* is also erroneous, but I will discuss this further in a later section.

For each species, there is a small distribution dot map of Greece with black dots representing specific record localities. I like this very precise method of illustrating distributions, but it is definitely a demanding and time-consuming task as it requires that you scrutinise all existing and relevant records. The creator has to judge how old records should be included and to what extent unpublished data should be used. In just three lines the criteria for making the maps are explained. They have been made “from the literature published in relevant scientific journals, after critically revising them to the best of our current knowledge” (p. 77). Is that all? I presume our six Greek colleagues have a wealth of hitherto unpublished records that could make the maps much more complete.

Naturally, the amount of space devoted to describing, e.g. single records, is limited, but if totally new records (in new areas) are published for the first time in this book, they

surely should be described briefly.

As I went through the individual maps, I found many of them quite surprising. A dominating trend is that numerous localities seem to be missing. The list of bibliographic references at the end of the book contains publications with lots of well-documented records that appear to have been entirely omitted from the maps. For widespread and ubiquitous species, there are large blank areas on the maps where they are well known to occur, for example, for *Bufo bufo*, *Hyla arborea*, *Lacerta trilineata* and *Ablepharus kitaibelii*, which the authors would probably also have found throughout these blank areas.

Even several records mentioned in the book itself were left out. There are, for instance, two photos of *Emys orbicularis* from Gialova (SW Peloponnese), one photo of *Ablepharus kitaibelii* from Meteora (C Greece), and one photo of *Lacerta trilineata* from Mt. Olympos (C Greece), but these records have not been represented by dots on the maps.

Another example is the map for *Coronella austriaca*. This species "is very common in Epirus, Macedonia, Thrace", but the map has only five dots from that huge northern Greek range whereas there is a higher density of dots in the south where the species is stated as "found rarely"!

The distribution map of *Vipera berus* is really wrong or at least extremely inaccurate. To my knowledge the only records known in Greece are those published by IOANNIDIS & BOUSBOURAS (1989) and that reference has been included in the book. However, these localities do not at all fit with the dots on the map of the book. Three dots are shown in lowlands (one even in the town of Thessaloniki!) and they are definitely wrong.

One surprising dot is on the map of *Mesotriton* (or *Ichthyosaura*) *alpestris* in the Rhodope Mountains. Nothing about that occurrence is mentioned in the text, and I do not think that there are any references giving that record. Was that dot placed in error?

These dot maps should have been prepared much more carefully. If the authors did not want to spend more time on that task, it would probably have been more

appropriate to use the more simplified and less ambitious range maps where entire ranges are given another colour or different appearance, such as crosshatching.

Throughout the book, there is a lack of consistency in the taxonomic level used for the amphibians and reptiles. More specifically, especially in the photo captions, the authors uncritically state them as either species or subspecies. The inconsistency is notably for polytypic species that are only represented by a single subspecies in Greece. For example, there are four photos of *Pelobates syriacus* (fig. 115-118). In one photo the individual is named *Pelobates syriacus*, but the three others are *Pelobates syriacus balcanicus*. Does that imply that attempts have been made to identify these four individuals to subspecies level? The same inconsistency applies to several other species.

A 29-page reference list and an overview of Greek taxa of amphibians and reptiles complete the book. It contains many useful references, but a number of important ones are missing, a few of which I have already mentioned earlier in this review. As well, I think the authors could have benefitted from some old standard works like WERNER (1938) and CYRÉN (1941), especially because some of these two herpetologists' earlier works have been included. A few references in the text were omitted from the literature: BATISTA et al. (2006) and STÖCK et al. (2006) in the *Pseudepidalea* (or *Epidalea*) *viridis* account, and SCHMIDTLER (1997) in the *Ablepharus kitaibelii* account.

In spite of the numerous errors, I might use *The Amphibians and Reptiles of Greece* on occasion, but indeed very carefully and critically. I rather prefer TRAPP's (2007) book, although it is restricted to mainland Greece and does not have any distribution maps. In conclusion, I must say that I cannot really recommend this new book. Multi-authorship should benefit from the strengths of all authors, especially when professional herpetologists are involved. This book has, unfortunately, failed to meet my expectations.

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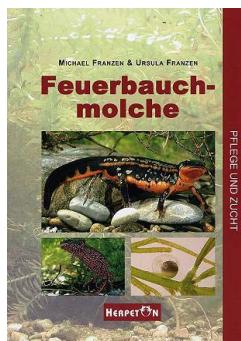
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Book review



GERMAIN, M.-S., 2006. Les tritons japonais et chinois.
De Vecchi S.A., Paris.
ISBN: 2-7328-8424-3
109 pages, bound, 124 colour photos
Price: €13.75



FRANZEN, M. & U. FRANZEN, 2005. Feuerbachmolche. Pflege und Zucht.
Herpeton Verlag, Offenbach.
ISBN: 3-936180-15-6
87 pages, bound, 82 colour photos
Price: €19.80

Recently two more or less similar books appeared on Fire-bellied newts, the genus *Cynops*: one was written in German in 2005, while the other, written in French, came out in 2006. The two books, written independently, were both written by people who kept Fire-bellied newts for many years and one can read the enthusiasm and love for newts that flowed into the texts. Both books have excellent colour pictures, contain roughly the same number of pages, are nicely produced and have an attractive appearance. The German one is a bit more expensive than its French counterpart.

The books differ somewhat in approach and content. The French book was written as a guideline for any newt keeper. Much of the information given is general, but it includes two species of Fire-bellied newts as examples: *Cynops orientalis* and *C. pyrrhogaster*. The German book sticks more rigorously to the subject and deals with all *Cynops* species, but focuses on the ones most commonly kept as pets: *C. orientalis*, *C. pyrrhogaster*, and *C. ensicauda*. This focus hints to one of the major differences between the two books: why is *Cynops ensicauda*, which for the past twenty years has been a commonly kept and bred species, not included in the French book? Perhaps it

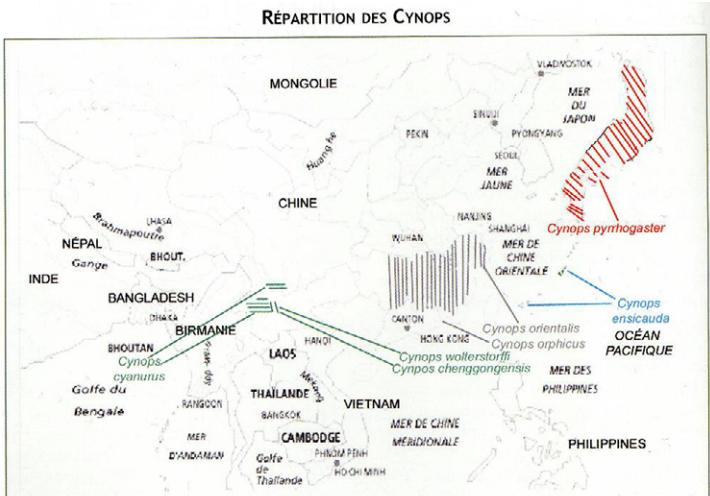
is less available in France than in Germany? The difference is to be found in the backgrounds of the authors. Michael Franzen is well-known in the herpetological community, not only for his articles on keeping and breeding species but also for his excellent field work. Marie-Sophie Germain is a scientific journalist who also keeps newts. Their approach to the same subject is therefore radically different. Where Michael and Ursula Franzen wrote from their own experiences, collected all relevant scientific and amateur publications, and combined it into a book on *Cynops* species, Marie-Sophie Germain was asked to write a book on this subject in an extremely short time and she combined all the information that she could use, from very general books to scientific articles. However, she did not dig into the many publications written in terrarium magazines, which makes a world of difference.

The German book is more consistent and tidy in its design. The German publisher clearly spent much more time on it. This can also be seen in the consistently good quality of the pictures, which appear to have been carefully selected. In the French book, there are more, sometimes very informative, drawings and pictures. From a technical stance, the latter vary in quality, but for

someone interested in *Cynops* species these can still be quite interesting, e.g. there are photos highlighting all of the belly pattern differences between races of *C. pyrrhogaster*. These photos make the French book more of an international product as they were taken by experienced newt keepers like Paul Bachhausen (Germany), Henk Wallays (Belgium) and Arnaud Jamin (France).

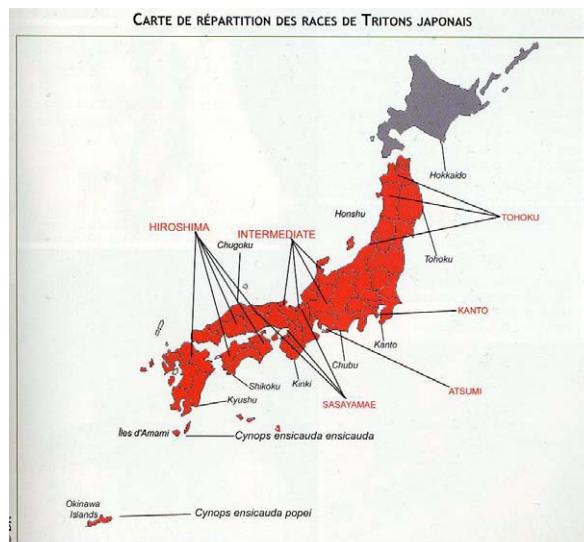
Let us compare some of the analogous figures, starting with the distribution maps. The maps in the French book are more complete and show more details (compare page 31 with the German page 54). The overview of the distribution of all *Cynops* species (page 26 in the French book) is very difficult to read, but in the German book there are only maps for *C. ensicauda*, *C. pyrrhogaster* and *C. orientalis*. The German book discusses all the other species within the genus, whereas the French book only lists names (and includes a map) but there is no discussion.

RÉPARTITION DES CYNOPS



GERMAIN (2006: 26).

The French book opens with a general forty-page chapter on biology of salamanders and newts, including ecology, taxonomy, and breeding behaviour. After that, it focuses on *C. pyrrhogaster* and *C. orientalis*. The next chapters are again more general, varying from 8-16 pages dealing with the terrarium-aquarium, feeding, hygiene, breeding, and diseases. There is a lot of information on water quality, which is an important facet for newt-keeping, but the question is, is this very important for Fire-bellied newts? I do not think so.



GERMAIN (2006: 31).



FRANZEN & FRANZEN (2005: 54).

The French book shows a nice layout and is well edited. There are, for instance, yellow cadres with theme topics explained, like neoteny and sex differences. In addition, scientific research is popularized within these cadres. The manner in which the scientific literature is explained for the hobbyist, is definitively one of the charms of this book. This is where the combination of the author being both a journalist and hobby newt keeper worked out very advantageously.

Which are the flaws? The languages can be a barrier, but this goes for both books. The French book lists a few internet sites, which show that the salamander and newt communities have a more English bias. The French book does not use literature references in the text, which makes it very diffi-

cult for a reader to check if something is a personal view, a statement from someone else, or copied from a publication. Because the books in the literature list are relatively poor in scientific quality, e.g. some of the TFH publications, a user might want to discern fact from fiction. Some bits of information are perhaps off-topic but are very nice to know, like the fact the *Cynops pyrrhogaster* is one of the amphibians used by NASA for research on development at zero-gravity from egg to larva (page 21), or the names of the Fire-bellied newts in other languages. The French book often gives information worth knowing to show how interesting and unique newts are, including information on their toxicity or on the origin of the red coloration, which by the way is also mentioned in the German book. Overall, however, the German book has few flaws.

I will point out some of the minor flaws of the French book. On page 30, pictures of a race of *C. pyrrhogaster* are shown from Kii peninsula, but on the distribution map on page 31 we only find a Kinki peninsula (which is correct?). There is also some free advertising in the pictures on page 58 for a company that produces different items to use in aquarium filters. The list of combinations of keeping these newts together with other animal species on page 89 looks very impressive, but the ideas presented are nothing more than sometimes useful suggestions, and could also have been cut down to one sentence: *Cynops* species are best not combined with other species of amphibians, fish or reptiles. The list of diseases seems very helpful and, unlike in Germany, in France there is not much literature available on the subject. Nevertheless, as we can read in the German book, without a visit to a specialised veterinarian, it is often impossible to tell exactly what kind of disease you are dealing with. *Cynops* species rarely get ill once they are in good health, but the animals found in pet stores are often in a very bad state. I advise anyone interested in these species to try to get captive-bred specimens. There are studbooks for these species (see: www.salamanderseiten.de or www.aquurodela.de).

In the French book there is a reference list, which does not refer much to articles pub-

lished by keepers and breeders in German, Dutch or English magazines. The German book includes this information and splits the list into articles referred to in the text and 'further reading'. The references in the German book are much more complete and stick more to the subject of *Cynops*. The reference section in the French book is divided into a general and a scientific (for the courageous reader!) list. The scientific references are subdivided further into four areas: those focused on *Cynops pyrrhogaster*, those on *C. orientalis*, general background references, and literature on a newt living in France, the Alpine newt, *Mesotriton alpestris*. As far as I know, this species is protected in France and may not be kept, so what need is there for this list? Moreover, if one should want to refer to a typical French species, why not choose the most common French species *Lissotriton helveticus*?

Put in perspective, French-language books on keeping and breeding newts are almost absent. Therefore, this French book clearly fills a gap, but someone who is more experienced and interested only in *Cynops* will find more information that is new in the excellent German book. Time was clearly not on the side of Marie-Sophie Germain. I think that if she had more time to include, for instance, more information from experienced keepers, she could have written a more comprehensive book. The book remains very general, and the title does not fit the content.

Both books give you enough interesting information for keeping and breeding newts. Even if you are not interested in *Cynops* species, these books are worth reading. However, both languages limit these books to a low percentage of potential readers. So, which one should be translated into English first? Well, I think both should be.

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Colofon

Vanaf jaargang 6 (2005) verschijnt het herpetologisch en terrariumkundig internettijdschrift POD@RCIS <http://www.podarcis.nl> alleen in het Engels (jaargang 1-5 was Nederlands- zowel als Engelstalig).

Voor plaatsing komen in aanmerking gedegen artikelen over reptielen, amfibieën en terrariumtechniek. De voorkeur gaat uit naar artikelen over voortplanting, gedrag en ecologie. Daarnaast zijn wij geïnteresseerd in studentenverslagen betreffende herpetologie. Auteurs ontvangen het pdf-bestand van hun bijdrage en indien gewenst één afdruk; het staat hen vrij die te vermenigvuldigen.

Nieuwe namen en nomenclatorische handelingen in deze publicatie zijn bedoeld voor het duurzame, openbare, wetenschappelijke archief zoals bedoeld in de International Code of Zoological Nomenclature. Identieke exemplaren van deze uitgave op cd/dvd èn papier zijn gedeponeerd in o.a. de bibliotheken van het museum Naturalis (Leiden) en de Koninklijke Bibliotheek (Den Haag); voor internationale bibliotheken zie Engelstalig colofon. POD@RCIS wordt o.a. geïndexeerd door de Zoological Record.

POD@RCIS wordt uitgebracht door de Stichting Podarcis, die als hoofddoel heeft het uitbrengen van herpetologische publicaties, ingeschreven bij de Kamer van Koophandel te Rotterdam onder nummer 24303166.

Aanwijzingen voor auteurs

Manuscripten aanbieden bij de hoofdredacteur: Herman in den Bosch, Instituut Biologie Leiden (IBL), Gedragsbiologie, Universiteit Leiden, Postbus 9516, NL-2300 RA Leiden, Nederland, editor@podarcis.nl (neem vooraf contact op wanneer u grote manuscripten (> 5 Mb) per e-mail stuurt).

Ofschoon POD@RCIS nu alleen in het Engels verschijnt, met Nederlandse samenvattingen, accepteren we zeker manuscripten in het Nederlands en eventueel in andere moderne talen (overleg met de hoofdredacteur). Samenvattingen in andere talen zijn mogelijk. Manuscripten bij voorkeur in Word indienen. Het manuscript dient niet al eerder gepubliceerd te zijn in welke vorm dan ook, of tegelijkertijd elders ter publicatie aangeboden te worden. Geen figuren, foto's, e.d. in de tekst invoegen, maar deze als aparte en duidelijk herkenbare bestanden aanleveren. Als illustraties komen in aanmerking goede dia's, zwartwit- en kleurenfoto's en zwartwit-tekeningen (in zwarte inkt) elk op een apart blad. Tekeningen en foto's maximaal op A4-formaat inzenden. De genummerde illustraties dienen elk vergezeld te gaan van een korte tekst als onderschrift. Vermeld deze teksten op een aparte pagina. Dia's krijgt u teruggestuurd, overige illustraties alleen op verzoek. Geaccepteerde digitale formats: BMP (tekeningen), GIF (1:1 100 dpi, max. 300 dpi), JPEG, TIFF (bij voorkeur). Raadpleeg voor stijl en indeling recente nummers van POD@RCIS.

Na de titel met Nederlandse en wetenschappelijke naam, volgen de naam en het adres van de auteur en een korte inleiding. De overige tekst onderverdeelden in hoofdstukken met zo kort mogelijke kopjes. Geen voetnoten gebruiken. Beëindig het artikel met een samenvatting en een alfabetische literatuurlijst met alle in de tekst aangehaalde werken. Citatiewijze: zie Engelstalig colofon.

Abonnement

Per jaar verschijnt een wisselend aantal nummers van het webzine POD@RCIS. De site van Podarcis bestaat uit een vrij toegankelijk deel (met aankondigingen, advertenties en archiefstukken) en het webzine-deel waarbij de huidige jaargang tegen betaling met individueel password bereikbaar is. Jaarabonnement 2008: €5,- Penningmeester (treasurer@podarcis.nl); Hellie Klaasse, Klaproosstraat 3, NL-2012 ZA Haarlem, Nederland, postgiro 8490492 (IBAN: NL24 PSTB 0008 4904 92, BIC: PSTBNL21). Eerdere jaargangen zijn gratis; dit verzekert de auteurs van een enorm publiek.

Coming soon: Remarks on *Philochortus*

