

The Fifth International Symposium on *Emys orbicularis* and the other European Freshwater Turtles, Kiten, Bulgaria: Over Twenty Years of Scientific Collaboration

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Abstract: The Fifth International Symposium on *Emys orbicularis* and the other European Freshwater Turtles was held in Kiten, Bulgaria, on 19–21 August 2015. It continued the tradition of international collaboration and exchange of knowledge related to the chelonians. The resultant proceedings combine 22 papers presented in the program of the symposium. They cover a wide range of topics: geographical distribution, habitats, life history, population dynamics, reproduction, sex structure of populations, genetics, feeding behaviour, diseases and other aspects associated with the biology, ecology and conservation of freshwater turtles. In addition, a set of specific recommendations for policy makers with respect to the conservation and especially handling of confiscated turtles (“Kiten Protocol”) was devised.

In 1996, a group of herpetologists and conservationists working with European Pond Turtles met at the *Emys* Symposium in Dresden, Germany. They joined to present their research and, equally important, to meet and exchange ideas in person. This was the very first international symposium devoted to “the European Pond Turtle” (that actually represents more than one species as we know now, see FRITZ et al. 2005, 2006, VAMBERGER et al. 2015). It was held only 21 years ago but in a time hard to imagine today. The Iron Curtain, dissecting Europe in a western and an eastern half, with limited contact possibilities for over 45 years, broke down only seven years before. Computers and the currently ubiquitous modes of internet communication were largely absent; even the usage of e-mails were not fully established yet. Social media were completely unknown. The regular way to communicate then was to exchange proper letters, to be

sent physically by mail, now referred to as “snail mail”, or at best to communicate by fax messages. Especially among nature conservationists, English had not yet fully outcompeted national languages by 1996 (and still has not now), thus it was a challenge for most of us to understand publications from abroad. Another challenge for the colleagues from the former Eastern Block was the adventurous journey “to the west” (part of which Dresden had become only seven years earlier when US President Ronald Reagan’s wish “tear down this wall, Mister Gorbachov” was executed by his Soviet colleague). Thus, the first *Emys* symposium was the very first opportunity for many researchers to come into contact and meet, and it was simply great to do so. Close collaborations and true friendships were established then, some lasting until today.

Two years after the meeting, the proceedings volume was published (FRITZ et al. 1998). Further



Fig. 1. Participants of the Fifth International Symposium on *Emys orbicularis* and the other European Freshwater Turtles, Kiten, Bulgaria. Missing from the picture are colleagues engaged in field herpetological activities (photograph by Alain Veyssset).

symposia followed, each with its own proceedings volume (BUSKIRK et al. 2000, FRITZ & HAVAŠ 2004, RICHTER BOIX & SANTOS SANTIRÓ 2008). The second bilingual symposium was held in French and English in Le Blanc, France, in 1999 (BUSKIRK et al. 2000). The third symposium, again completely in English, was in Košice, Slovakia, in 2002 (FRITZ & HAVAŠ 2004), and the fourth symposium was in 2005 in Valencia (RICHTER BOIX & SANTOS SANTIRÓ 2008). This fourth symposium opened the scope also to other Western Palearctic freshwater turtle species. It is a great pleasure for us to write now the introductory article for the proceedings volume of the fifth *Emys* symposium, collating the results of research presented in Kiten, Bulgaria, August 19th to 21st, 2015.

Each symposium aimed to reach additional participants. Even though the mission of the first symposium was to bring together researchers from the entire distribution range of the European Pond Turtle, it turned out that, due to financial constraints, colleagues from very distant regions could not afford to come. Therefore, the second and fourth symposia were held in the west and southwest of the distribution range, whilst the third and the fifth symposia aimed at colleagues from the east and the southeast. The long period of ten years, elapsed between the fourth and fifth symposium, however, evinces that times have changed. Part of the time gap may be due to the fact that today the internet, through its multiple avenues of (almost) real-time contact (e.g. e-mail, Voice-over-Internet calls, and not least social networks) facilitates rapid communication all around the globe, as well as the spread of “alternative truths”. Thus, to meet in person became less important than approximately 20 years ago. Nevertheless, the Kiten symposium showed that the personal contact remains the best means to exchange ideas and establish long-lasting collaborations and, most importantly, to create friendships – beyond the more or less meaningless cyberfriend status of social media, reflecting a virtual world that mocks life but cannot provide live feelings, true honesty and proper contacts. For all of these reasons, the fifth *Emys* symposium was a much-appreciated milestone that continued the tradition of its predecessors.

This 5th proceedings volume contains 22 scientific manuscripts from 71 authors representing 13 countries, covering a range of topics related to the biology and conservation of aquatic turtles. For example, several contributions update our knowledge on the distribution and habitat requirements in Albania (SAÇDANAKU & HAXHIU 2017), Bulgaria

(KORNILEV et al. 2017a, POPGEORGIEV et al. 2017), Latvia (PUPINS et al. 2017), Romania (BÎRSAN et al. 2017), Serbia (GOLUBOVIĆ et al. 2017) as well as life history and population dynamics in Sicily (OTTONELLO et al. 2017) and Turkey (AYAZ et al. 2017, BAYRAKCI et al. 2017). The mechanics and motorics of feeding subadults provide insight on some limiting factors in the life history (KUMMER et al. 2017). Questions related to reproduction were explored further through genetic methods for kinship group reconstruction (DUX et al. 2017), modelling the in situ clutch sex ratio (MONSINJON et al. 2017) and environmental variables related to nesting onset (HORVÁTH et al. 2017) and nest conditions (BONA et al. 2017). Conservation aspects include road mitigation measures (STOILOVA & NATCHEV 2017) and a tool for predator exclusion from nest sites (SCHINDLER et al. 2017). A novel method for data collection through the use of unmanned aerial vehicles (drones) may become common in the future (BISERKOV & LUKANOV 2017). The results of long-term starter and reintroduction programs in the Czech Republic (ŠEBELA 2017) and Spain (MASCORT & BUDÓ 2017) bring hope for the future of local populations and provide valuable veterinary lessons for the successful raising of hatchlings (MARTÍNEZ-SILVESTRE et al. 2017). Most studies target *Emys orbicularis*, but the investigation by OTTONELLO et al. (2017) presents life history data of the Sicilian endemic *Emys trinacris*, and the studies by KORNILEV et al. (2017a) and POPGEORGIEV et al. (2017) also include *Mauremys rivulata*.

In addition, the volume contains the “Kiten Protocol”, a set of specific recommendations for policy makers with respect to conservation and conservational issues of European Pond Turtles (KORNILEV et al. 2017b). These best practices are the direct result of a spontaneous discussion among concerned individuals held at the symposium, inspired by a recent case of a massive confiscation of turtles in Serbia (NIKOLIĆ & GOLUBOVIĆ 2017).

We would like to think that the symposium itself was a fruitful and positive experience for all participants (Fig. 1). However, it would not have happened without the invaluable aid of our friends, colleagues, and volunteers that helped prior, during, and after the event. We are deeply indebted to them. The venue staff at TD “Kiten” also provided us with incredible hospitality and helped us run a smooth congress; we thank them wholeheartedly. The proceedings themselves would not have materialized without the professionalism and patience exhibited during the editorial process by all the authors; the valuable suggestions and improvements

of the manuscripts provided by the external reviewers (recognized separately in a regular issue of *Acta Zoologica Bulgarica*) as well as the support and expertise of the AZB editor-in-chief and staff.

The symposium was dedicated to the memory of the prominent herpetologist Dr Tatiana I. Kotenko (1949–2013) of the Institute of Zoology, National Academy of Sciences of Ukraine, Kiev, in recognition of her contributions to science. This said, we are in deep grief that some of the

organizers, colleagues and friends could not harvest the fruits of their efforts. Thus, we dedicate the proceedings to all of them. We will remember them forever...

We wish that this proceedings volume and, hopefully, that of a forthcoming next symposium, will continue the success story of the ongoing collaborative mood and friendship among colleagues sharing a common interest – the biology and conservation of pond turtles in Europe and beyond.

References

- AYAZ D., ÇIÇEK K., BAYRAKCI Y. & TOK C. V. 2017. Reproductive ecology of the European Pond Turtle, *Emys orbicularis* (Linnaeus, 1758), from Mediterranean Turkey. *Acta Zoologica Bulgarica*, Supplement 10: 23–29.
- BAYRAKCI Y., AYAZ D., ÇIÇEK K. & İLHAN S. 2017. Population dynamics of the European Pond Turtle, *Emys orbicularis* (L., 1758) (Testudinata: Emydidae) from Lake Eğirdir (Isparta, Turkey). *Acta Zoologica Bulgarica*, Supplement 10: 31–35.
- BÎRSAN C.-C., IOSIF R., SZÉKELY P. & COGĂLNICEANU D. 2017. Spatio-temporal bias in the perceived distribution of the European Pond Turtle, *Emys orbicularis* (Linnaeus, 1758), in Romania. *Acta Zoologica Bulgarica*, Supplement 10: 37–41.
- BISERKOV V. Y. & LUKANOV S. P. 2017. Unmanned aerial vehicles (UAVs) for surveying freshwater turtle populations: methodology adjustment. *Acta Zoologica Bulgarica*, Supplement 10: 161–163.
- BONA M., DANKO S., BÚREŠOVÁ A., NOVOTNÝ M. & HAVAŠ P. 2017. Thermal conditions in nest chambers of the European Pond Turtle, *Emys orbicularis* (L., 1758), in Tajba National Nature Reserve, Slovakia. *Acta Zoologica Bulgarica*, Supplement 10: 43–47.
- BUSKIRK J., CHEYLAN M., DUGUY R., FRITZ U., JABLONSKY A., KELLER C., PIEAU C., PODLOUCKY R., SERVAN J. & TSKAVAK E. (Eds.) 2000. 2nd Symposium International sur *Emys orbicularis*/2nd International Symposium on *Emys orbicularis*. *Chelonii* 2: 1–143.
- DUX M., DOKTÓR D., HRYNIEWICZ A. & PRUSAK B. 2017. Evaluation of 11 microsatellite loci for reconstructing of kinship groups in the European Pond Turtle, *Emys orbicularis* (Linnaeus, 1758). *Acta Zoologica Bulgarica*, Supplement 10: 15–22.
- FRITZ U. & HAVAŠ P. (Eds.) 2004. Proceedings of the 3rd International Symposium on *Emys orbicularis*. *Biologia* 59 (Supplement 14): 1–209.
- FRITZ U., D'ANGELO S., PENNISI M. G. & LO VALVO M. 2006. Variation of Sicilian Pond Turtles, *Emys trinacris* – What makes a species cryptic? *Amphibia-Reptilia* 27: 513–529.
- FRITZ U., FATTIZZO T., GUICKING D., TRIPEPI S., PENNISI M. G., LENK P., JOGER U. & WINK M. 2005. A new cryptic species of pond turtle from southern Italy, the hottest spot in the range of the genus *Emys*. *Zoologica Scripta* 34: 351–371.
- FRITZ U., JOGER U., PODLOUCKY R. & SERVAN J. (Eds.) 1998. Proceedings of the EMYS Symposium Dresden 96. *Mertensiella* 10: 1–302.
- GOLUBOVIĆ A., GRABOVAC D. & POPOVIĆ M. 2017. Actual and potential distribution of the European Pond Turtle, *Emys orbicularis* (L., 1758) in Serbia, with conservation implications. *Acta Zoologica Bulgarica*, Supplement 10: 49–56 + i-vii.
- HORVÁTH E., HAVAŠ P., DANKO S., BONA M., NOVOTNÝ M., BÚREŠOVÁ A., KAŇUCH P. & UHRIN M. 2017. The effect of two weather parameters on the timing of nesting in a critically endangered population of the European Pond Turtle, *Emys orbicularis* (L., 1758). *Acta Zoologica Bulgarica*, Supplement 10: 57–63.
- KORNILEV Y., NATCHEV N., MASCORT R. & FRITZ U. 2017b. Best practices for handling confiscated turtles: The Kiten Protocol. *Acta Zoologica Bulgarica*, Supplement 10: 165–168.
- KORNILEV Y., POPGEORGIEV G., NAUMOV B., STOYANOV A. & TZANKOV N. 2017a. Updated distribution and ecological requirements of the native freshwater turtles in Bulgaria. *Acta Zoologica Bulgarica*, Supplement 10: 65–76 + i-xvii.
- KUMMER S., HEISS E., SINGER K., LEMELL P. & NATCHEV N. 2017. Feeding behaviour and feeding motorics in subadult European Pond Turtles, *Emys orbicularis* (Linnaeus, 1758). *Acta Zoologica Bulgarica*, Supplement 10: 77–84.
- MARTÍNEZ-SILVESTRE A., VERDAGUER I., VIDAL F., FORTUÑO L., FRANCH M. A., SOLER J. & VELARDE R. 2017. High mortality associated with thyroid hyperplasia in European Pond Turtles, *Emys orbicularis* (L., 1758) (Emydidae) in a breeding facility at the Ebro Delta, NE Spain. *Acta Zoologica Bulgarica*, Supplement 10: 85–89.
- MASCORT R. & BUDÓ J. 2017. The European Pond Turtle, *Emys orbicularis* (L., 1758), in the River Ter Basin (North East Iberian Peninsula): 40 years of conservation. *Acta Zoologica Bulgarica*, Supplement 10: 91–104.
- MONSINJON J., GUILLON J.-M., HULIN V. & GIRONDOT M. 2017. Modelling the sex ratio of natural clutches of the European Pond Turtle, *Emys orbicularis* (L., 1758), from air temperature. *Acta Zoologica Bulgarica*, Supplement 10: 105–113.
- NIKOLIĆ S. & GOLUBOVIĆ A. 2017. Confiscated *Emys orbicularis* (L., 1758) dying out in a “temporary” reception facility in Serbia: a case study showing the urgency for a regional reptile rescue centre. *Acta Zoologica Bulgarica*, Supplement 10: 115–120.
- OTTONELLO D., ONETO F., MALAVASI S., ZUFFI M. A. L. & D'ANGELO S. 2017. Preliminary data on the population of the Sicilian Pond Turtle, *Emys trinacris* Fritz et al., 2005 (Emydidae) inhabiting the Gorgo Tondo Basso in the “Lago Preola e Gorgi Tondi” Nature Reserve, Sicily, Italy. *Acta Zoologica Bulgarica*, Supplement 10: 121–127.
- POPGEORGIEV G., KORNILEV Y. V., NATCHEV N., NAUMOV B.,

- IVANCHEV I., SLAVCHEV M., STOYANOV A. & TZANKOV N. 2017. Spatial distribution of *Emys orbicularis* (L., 1758) and *Mauremys rivulata* (Valenciennes, 1833) in the lower Veleka River, Bulgaria: first observations. *Acta Zoologica Bulgarica*, Supplement 10: 129–132.
- PUPINS M., PUPINA A. & PUPINA A. 2017. Updated distribution of the European Pond Turtle, *Emys orbicularis* (L., 1758) (Emydidae) on the extreme northern border of its European range in Latvia. *Acta Zoologica Bulgarica*, Supplement 10: 133–137.
- RICHTER BOIX A. & SANTOS SANTIRÓ X. (Eds.) 2008. IV International Symposium on *Emys orbicularis*. *Revista Española de Herpetología* 22: 1–163.
- SAÇDANAKU E. & HAXHIU I. 2017. Distribution, habitats and preliminary data on the population structure of the European Pond Turtle, *Emys orbicularis* (Linnaeus, 1758), in Vlora Bay, Albania. *Acta Zoologica Bulgarica*, Supplement 10: 9–14.
- SCHINDLER M., FRÖTSCHER H., HILLE A., BRUCK M. R., SCHMIDT M. & KORNILEV Y. V. 2017. Nest protection during a long-term conservation project as a tool to increase the autochthonous population of *Emys orbicularis* (L., 1758) in Austria. *Acta Zoologica Bulgarica*, Supplement 10: 147–154.
- ŠEBELA M. 2017. History of the reintroduced population of the European Pond Turtle, *Emys orbicularis* (L., 1758) (Emydidae), at the Betlém site, South Moravia, Czech Republic. *Acta Zoologica Bulgarica*, Supplement 10: 139–145.
- STOILOVA N. & NATCHEV N. 2017. Prevention of turtle's access to the road: specifics of the Environmental Impact Assessment conditions and measures issued for the priority objects from the national linear infrastructure network in Bulgaria. *Acta Zoologica Bulgarica*, Supplement 10: 155–160.
- VAMBERGER M., STUCKAS H., SACCO F., D'ANGELO S., ARCULEO M., CHEYLAN M., CORTI C., LO VALVO M., MARRONE F., WINK M. & FRITZ U. 2015. Differences in gene flow in a twofold secondary contact zone of pond turtles in southern Italy (Testudines: Emydidae: *Emys orbicularis galloitalica*, *E. o. hellenica*, *E. trinacris*). *Zoologica Scripta* 44: 233–249.

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