

A new record of *Hemidactylus turcicus* (Linnaeus, 1758) (Reptilia: Gekkonidae) from Bulgaria

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Abstract. A single individual of *Hemidactylus turcicus* is reported from Sofia, Bulgaria. This is the first reliable registration of this species in the country. It is suggested that the individual observed was accidentally introduced to the site as a result of human activity.

Key words: Squamata, introduction, Balkan Peninsula.

The Turkish Gecko, *Hemidactylus turcicus* (Linnaeus, 1758), is a common species in lowland areas all along the Mediterranean coast and most of the Mediterranean islands, also occurring inland in some areas (in Europe in southern Spain and parts of Italy; in Asia east to Iran; northeast Africa south to Somalia). It was also introduced in the USA, Mexico, Cuba, Panama, etc., where it has adapted well and is successfully spreading to neighbouring areas (Speybroeck *et al.* 2016, Uetz *et al.* 2024 and references therein).

In Bulgaria, two native gecko species occur – *Mediodactylus danilewskii* (Strauch, 1887) and *M. kotschyi* (Steindachner, 1870). An alien species, *Tarentola mauritanica* (Linnaeus, 1758), was recently reported from two locations (Stojanov *et al.* 2011, Kotsakiozi *et al.* 2018, Jablonski *et al.* 2022). *Hemidactylus turcicus* has been reported for the town of Plovdiv (S Bulgaria) by Shkorpil (1897), but according to Kovachev (1905) this record most probably is due to erroneous species identification and actually applies to *Gymnodactylus kotschyi* [= *Mediodactylus kotschyi* or *M. danilewskii* according to the modern taxonomy]. There is also an unconfirmed record of *H. turcicus* in SW Bulgaria: several individuals, observed in 1998 on the walls of the train station in the town of Sandanski (Gvoždik & Šnajdr 2001). This station was visited several times in the past decade by our colleagues, but only *M. kotschyi* was observed on the building walls (A. Pulev and G. Manolev; pers. comm. to BN).

On 12 December 2024, a subadult individual of *H. turcicus* (Fig. 1) was detected inside an apartment building in the Poligona residential area in the capital city of Sofia (N42°39'52" E23°22'48", 572 m a.s.l.). Species affiliation was identified based on the presence of tubercles over the body and toes with clearly visible claws and adhesive pads composed of two rows of lamellae, which do not reach the toe tips (Speybroeck *et al.* 2016).

We consider this record as an accidental human-mediated introduction, but it also must be borne in mind that *H. turcicus* has proven to be a very good coloniser (Salgueiro *et al.* 2013). Note that the location of *H. turcicus* is very close to one of the locations (Druzhba residential area, Sofia) where the other gecko alien to Bulgaria (*T. mauritanica*) was recently found (see Jablonski *et al.* 2022). In view of this and given the fact that both species are largely synanthropic (Rato *et al.* 2011), we believe that it is necessary to conduct monitoring in this part of the city of Sofia. This could clarify the situation, i.e. whether these are

random finds or there are other geckos on the walls of the buildings, which in turn would be a prerequisite for the formation of a local population.



Fig. 1. The individual of *Hemidactylus turcicus* found in Poligona, Sofia.

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References

- Gvoždík, V. & Šnajdr, R. (2001) Herpetofauna a batrachofauna Bulharska (2). *Akvárium Terárium*, 44 (9): 74-78.
- Jablonski, D., Naumov, B. & Pulev, A. (2022) First Record of the Moorish Gecko *Tarentola mauritanica* (Linnaeus, 1758) (Squamata: Phyllodactylidae) for Bulgaria. *Acta zoologica bulgarica*, 74 (1): 143-146.
- Kotsakiozi, P., Jablonski, D., Ilgaz, Ç., Kumlutaş, Y., Avcı, A., Meiri, S., Itescu, Y., Kukushkin, O., Gvoždík, V., Scillitani, G., Roussos, S., Jandzik, D., Kasapidis, P., Lymberakis, P. & Poulakakis, N. (2018) Multilocus phylogeny and coalescent species delimitation in Kotschy's gecko, *Mediodactylus kotschyi*: Hidden diversity and cryptic species. *Molecular Phylogenetics and Evolution*, 125: 177-187.
- Kovachev, V. (1905) Prinosa za izuchavane zemnovodnite i vlechugite v Balgaria. *Sbornik za narodni umotvoreniya, nauka i knizhnina*, 21: 1-13 (in Bulgarian).
- Rato, C., Carranza, S. & Harris, D.J. (2011) When selection deceives phylogeographic interpretation: the case of the Mediterranean house gecko, *Hemidactylus turcicus* (Linnaeus, 1758). *Molecular Phylogenetics and Evolution*, 58: 365-373.
- Salgueiro, P.A., Medinas, D., Silva, C., Silva, A. & Mira, A. (2013) New data on the distribution range of *Hemidactylus turcicus* in Portugal. *Boletín de la Asociación Herpetológica Española*, 24: 79-82.
- Shkorpil, H. (1897). Varhu plovdivskata flora (Geologicheski i faunisticski belezhki). *Saglasie, Plovdiv*, 23 pp. (in Bulgarian).

- Speybroeck, J., Beukema, W., Bok, B., Van Der Voort, J. & Velikov, I. (2016) *Field Guide to the Amphibians and Reptiles of Britain and Europe*. Bloomsbury Publishing, London & New York, 432 pp.
- Stojanov, A., Tzankov, N. & Naumov, B. (2011) *Die Amphibien und Reptilien Bulgariens*. Chimaira, Frankfurt am Main, 588 pp.
- Uetz, P., Freed, P., Aguilar, R., Reyes, F., Kudera, J. & Hošek, J. (eds.) (2024) *The Reptile Database*. Available at: <http://www.reptile-database.org>. (Accessed on 5 January 2025).