

# Between mountains and plains: a new distribution record of *Darevskia praticola* (Eversmann, 1834) in south-western Romania (Squamata, Lacertidae)

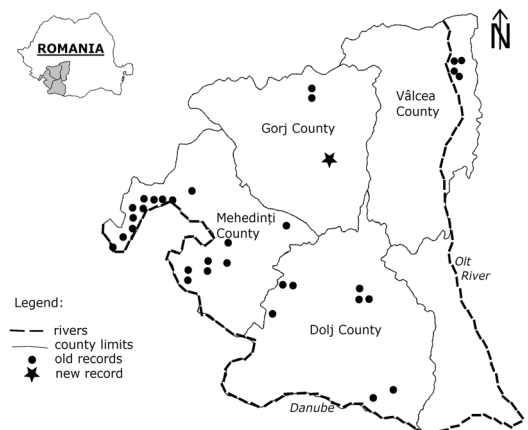
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Among Romanian regions, the southwest region shelters the highest number of reptile species, including the meadow lizard *Darevskia praticola* (Eversmann, 1834) (see in: Cogălniceanu et al., 2013). In southern Romania, *D. praticola* has a scattered distribution including gaps (see Sos et al., 2012; Cogălniceanu et al., 2013), even despite recent new distribution records (Gaceu and Josan, 2013; Bogdan et al., 2014; Sucea, 2019; Covaciu-Marcov et al., 2020). Beyond Romania, generally this species' distribution range is fragmented, with a southeast European part and a Caucasian part that are separated by the Black Sea (e.g., Fuhn and Vancea, 1961; Agasyan et al., 2009). Likewise, this pattern occurs within the SE European part, which is scattered in Romania, Serbia, Bulgaria, Greece and European Turkey (Ćorović et al., 2018). Recent manuscripts have discussed the exact taxonomic position of different populations of this species (e.g., Tuniyev et al., 2011; Freitas et al., 2016). According to the most recent data, the southeast European part of its distribution range concerns *D. p. hungarica* (see in Speybroeck et al., 2020).

*D. praticola* is related to wet and shady broad-leaf forests (Fuhn and Vancea, 1961; Agasyan et al., 2009), and in Romania is protected by law (O.U.G. 57/2007). Its elevational distribution varies in Romania, where it occurs in low plain areas (Fuhn and Vancea, 1961; Covaciu-Marcov et al., 2009a; Sos et al., 2012), but can also reach 1000 m elevation (Iftime and Iftime, 2006), as it seems related with moderate environmental temperatures (Ćorović and Crnobrnja-Isailović, 2018). Even if large areas from southwest Romania were

considered suitable for *D. praticola* (Ćorović et al., 2018), its Romanian distribution is still poorly known. Indeed, records from novel south Romanian areas have recently been described (Gherghel et al., 2011; Sos et al., 2012; Gaceu and Josan, 2013; Sucea, 2019; Iftime and Iftime, 2019; Covaciu-Marcov et al., 2020), though large distribution gaps in Romania remain. This note on *D. praticola* contributes towards a more complete knowledge of its Romanian distribution by filling a large gap.

On 5 September 2020, we identified a new distribution locality for *D. praticola* near Jupânești, in southern Romania (44.9205°N, 23.5308°E) (Fig. 1, 2). No records are known from this region (e.g., Sos et al., 2012; Cogălniceanu et al., 2013). The new distribution record is located at approximately 5 km south from the town of Târgu Cărbunești, in the central area of Gorj County. This area belongs to the Getic Piedmont (Posea and Badea, 1984). *D. praticola* was encountered at 226



**Figure 1.** The distribution of *D. praticola* in southwest Romania (circle – previous records from Cogălniceanu et al. (2013), Covaciu-Marcov et al. (2020), star – new record from Jupânești).

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**Figure 2.** *Darevskia praticola* individual from Jupânești, Gorj county, southwestern Romania. Photograph taken by Achim-Mircea Cadar.

m elevation, at the edge of an oak forest, which borders with pastures and agricultural lands (Fig. 3). During a ~30 min walk along the forest edge, we observed six *D. praticola* individuals. All individuals were encountered at the forest edge, in sunny areas with herbaceous vegetation and bushes. In case of danger, they took refuge in the forest, in areas with dense bushes and trees. Besides the meadow lizard, only *Lacerta viridis* (Laurenti, 1768) was present in higher numbers than *D. praticola*.

Although southwestern Romania is considered a suitable area for *D. praticola* (Ćorović et al., 2018), there are large gaps in its distribution range in the region (e.g., Sos et al., 2012; Cogălniceanu et al., 2013). Thus, the identification of *D. praticola* at Jupânești is not just a new distribution record of this species in Romania, but it has biogeographic importance. The new record completes the species distribution range in southwestern Romania, as it is situated between the previously known scattered localities. Thus, it represents a connection both between the south and north, (between plains: Lazăr et al., 2005; Covaciu-Marcov et al., 2009a; and, mountains: Covaciu-Marcov et al., 2009b; Sucea, 2019) and between the west and east areas (between Danube Gorge: Covaciu-Marcov et al., 2009a; and, Olt River Gorge: Iftime and Iftime, 2006, 2019; Covaciu-Marcov et al., 2020). The new distribution record is situated at approximately 40 km from previous records in the Jiu River Gorge (Covaciu-Marcov et al., 2009b; Sucea, 2019), and at ~80 km from those around the Cozia Mountain in Olt River Gorge (Iftime and Iftime, 2006, 2019; Covaciu-Marcov et al., 2020).

*D. praticola* is a species related to forests (Fuhn and Vancea, 1961; Agasyan et al., 2009), which supports the observations from Jupânești along a forest edge. Nevertheless, the forest edge was relatively dry, even if this species is considered related to wet habitats (Fuhn and Vancea, 1961). The population from Jupânești therefore joins previous records from drier areas (Sucea, 2019). Nevertheless, there are two small streams at some hundreds of meters from the forest edge. The elevation at Jupânești is intermediate among this species' records in Romania; it has been recorded at low elevation plains (Lazăr et al., 2005; Covaciu-Marcov et al., 2009a), but also at higher elevation mountain areas (Covaciu-Marcov et al., 2009b, 2020), even at 1000 m (Iftime and Iftime, 2006). Thus, Jupânești locality can be considered a transit point between the mountain and plain areas. This indicates that there is no barrier between previously reported *D. praticola* localities in southwestern Romania. Also, it confirms that the species was probably more widespread in the region before deforestation practices (Gherghel et al., 2011).

Compared with other lizard species, *D. praticola* has a more limited spatial niche as it is related to few habitat types (e.g., Vacheva et al., 2020), which could explain that it was not previously mentioned from the Jupânești area. Probably, *D. praticola* has a wider distribution in the region, as the broad-leaved forests are still well represented in the Getic Piedmont (Vlăduț et al., 2017), including numerous habitats similar to that of the Jupânești locality. Also, an amphibian species related to forests, namely *Salamandra salamandra* (Linnaeus, 1758), was recently recorded in the region (Covaciu-Marcov et al., 2012). Overall, these data suggest that the region's biodiversity is relatively unknown, and that *D.*



**Figure 3.** Habitat of *Darevskia praticola* at Jupânești locality. Photograph taken by Achim-Mircea Cadar.

*praticola* is likely also present nearby habitats which have been insufficiently studied. Thus, the region's herpetofauna should be properly studied, including the protected area of the nearby Jiu River Corridor, where *D. praticola* might additionally be present and populations would benefit from its conservation status.

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