## An interesting new record of Egyptian locust *Anacridium aegyptium* (Linnaeus, 1764) (Orthoptera: Acrididae) for Slovenian inland

Zanimiva nova najdba egipčanske kobilice *Anacridium aegyptium* (Linnaeus, 1764) (Orthoptera: Acrididae) v notranjosti Slovenije

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The Egyptian locust (also known as the Egyptian bird grasshopper; Anacridium aegyptium (Linnaeus, 1764)) is one of the largest grasshoppers of Europe (Harz 1975) and Slovenia (Gomboc 2003). It reaches the adult stage in late summer, with adult animals surviving colder months and winter till next May (Bellman 2009). It is known to occur throughout the European Mediterranean (Gomboc 2003, Bellman 2009, Hochkirch et al. 2016) as well as in North Africa and the Middle East (see Hochkirch et al. 2016). Reports from Austria also show that the species is capable of reaching inland areas by different means of human assistance, e.g. with train transport (Zuna-Kratky 2017). Considered rare in the country (Gomboc 2003), in the last three decades, the species has only been recorded in Slovenian Littoral, with the easternmost data being noted in the Vipava valley (Gomboc 2013). Only a single old inland record of A. aegyptium has been known from Slovenia so far. The species was reported by Us (1971, 1992) from Grintovec near Kočevje, where the author recorded 2 female larvae on 28. 7. 1969.

On 23. 4. 2018, bat mist-netting (Kunz & Kurta 1988) was carried out as a part of the »Netopirji - skrivnostni Ljubljančani 3« project (SDPVN 2018). The nets were placed in an almost straight line of 33 metres in length and about 4 meters in height across several shallow ponds in the area of Jarše gravel pit, located in the north-eastern part of

Ljubljana (46.076463° N, 14.544973° E; 287 m a. s. l.) The field work was conducted between 20:00 and approximately 22:30 hrs. The weather on that day was dry with an occasional breeze. Apart from two bat species (*Pipistrellus pygmaeus* and *P. kuhlii*), we also captured one individual of *A. aegyptium*. The locust was entangled in the net sometime after 22:00 and was immediately rescued. Photographs (Fig. 1) were taken and the animal was released unharmed. The species identity was suggested by initially consulting Bellman's manual (2009) and afterwards verified by consulting three Slovenian orthopterists (D. Galjot, P. Trontelj & S. Gomboc).



**Figure 1.** The caught individual of *A. aegyptium*, Jarše gravel pits, NE Ljubljana, 23. 4. 2018 (photo: Nejc Polianec).

**Slika 1.** Újeti osebek *A. aegyptium*, betonarna Jarše, SV Ljubljana, 23. 4. 2018 (foto: Nejc Poljanec).

As confirmed by expert consultancy (D. Galjot, S. Gomboc & M. Bedjanič, pers. comm.) and browsing through available literature (e.g. Us 1971, 1992, Gomboc 2013), this is the first recent record of the species in Slovenian inland after almost 50 years. The Egyptian locust is a keen flyer (Gomboc 2003) and the aerial distance of about 50 km from the nearest parts of the Littoral makes the find not so unusual. The caught individual, however, probably did not overwinter in the nearby area due to quite severe winter conditions between late February and early March 2018 (ARSO 2018). Another set of possible explanations for our find is related to human activity. It is possible that the caught individual was brought in by accidental transport, either by car or train, since Ljubljana is an important

junction for main Slovenian highways and railway tracks. For example, at least a few findings of A. aegyptium from neighbouring Austria can be attributed to trains (Zuna-Kratky 2017). This possibility is further supported by a single observation of *Decticus albifrons*, another Mediterranean species, found in Ljubljana in close proximity to the railway line (Trontelj 2004). Zuna-Kratky (2017), however, also comments that the majority of Austrian observations of A. aegyptium were probably due to accidental import with Mediterranean plant material, which is also an option in our case, considering the urban location of our find. Regardless of the real explanation for our find, it is perhaps reasonable to expect further individuals of the species in continental Slovenia as a result of human-mediated introduction in the future.

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## References

- ARSO (2018): Mraz, sneg in veter od 18. februarja do 6. marca 2018. Urad za meteorologijo in hidrologijo, Agencija Republike Slovenije za okolje, Ljubljana, 29 pp.
  - http://www.meteo.si/uploads/probase/www/climate/text/sl/weather\_events/mraz-sneg-
  - veter\_18feb-6mar2018.pdf [Accesed in May 2018]
- Bellman H. (2009): Naše in srednjeevropske žuželke. Založba Narava, Olševek, 445 pp.

- Gomboc S. (2003): Kobilice Orthoptera (Saltatoria). In: Sket B., Gogala M., Kuštor V. (Eds.), Živalstvo Slovenije, Tehniška založba Slovenije, Ljubljana, pp. 308-318.
- Gomboc S. (2013): Kobilice/Orthoptera. In: Pavšič J. (Ed.), Vipavska dolina. Slovenska matica, Ljubljana, pp. 136-145.
- Harz, K. (1975): Die Orthopteren Europas II. Series Entomologica 11, Junk, The Hague.
- Hochkirch A., Kristin A., Szovenyi G., Presa J.J., Rutschmann F., Chobanov D. P., Kleukers R., Willemse L. P. M. (2016): *Anacridium aegyptium*. The IUCN Red List of Threathened Species. International Union for Conservation of Nature and Natural Resources.
  - http://www.iucnredlist.org/details/16084533/1 [accesed in May 2018]
- Kunz T. H., Kurta A. (1988): Capture methods and holding devices. In: Kunz T. H. (ed.), Ecological and behavioral methods for the study of bats. Smithsonian Institution Press, Washington D.C., London, pp. 1-29.
- Trontelj P. (2004): Unexpected record of the white-faced bush-cricket *Decticus albifrons* (Fabricius, 1775) (Orthoptera: Tettigoniidae) in Ljubljana, central Slovenia. Nat. Slov.6(2): 57.
- Us P. A. (1971): Beitrag zur Kenntnis der Orthopteren-Fauna (Saltatoria) von Slowenien. Beitr. Entomol. 21(1/2): 5-31.
- Us P.A. (1992): Favna ortopteroidnih insektov Slovenije. SAZU, Raz. za prir. vede 32(12), 314 pp.
- SDPVN (2018): Netopirji skrivnostni Ljubljančani 3. http://www.sdpvn-drustvo.si/netopirjiskrivnostni-ljubljancani-3.html [accesed in December 2018]
- Zuna-Kratky T. (2017): Eingeschleppte, nicht dauerhaft etablierte Arten. In: Zuna-Kratky T., Landmann A., Illich I., Zechner L., Essl F., Lechner K., Ortner A., Weißmair W., Wöss G. (Eds.), Die Heuschrecken Österreichs. Denisia 39, pp. 816-818.