

# Timed Counts in Hungary

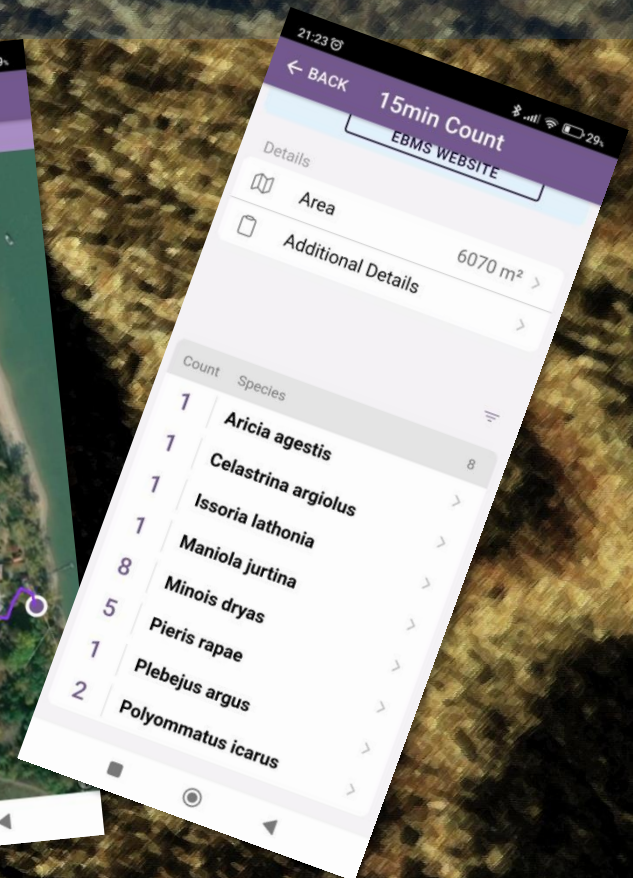
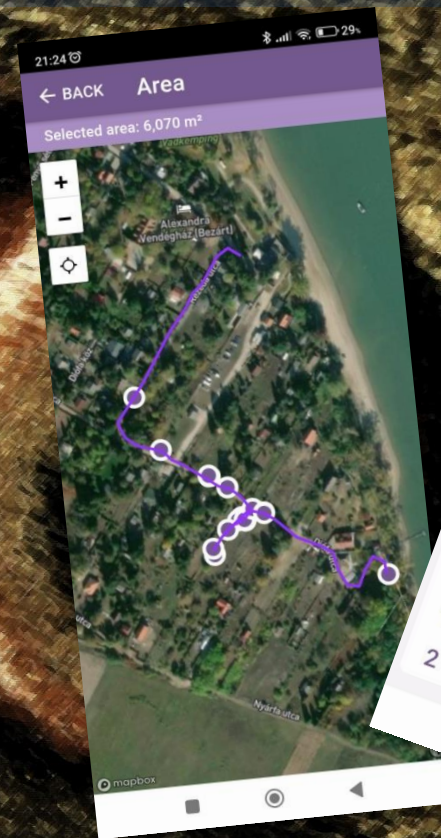
the use of general/single species 15-minute counts

» Potential

» Present use

» Dangers

» Future

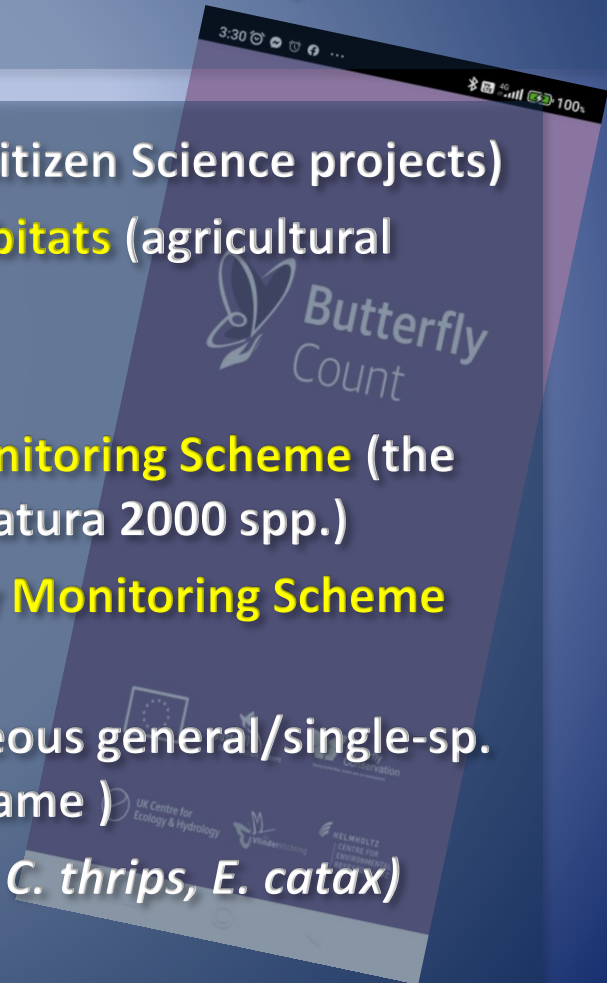


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## eBMS app with 15-min count appeared >> huge potential (in the app and in the method):

- **large scale involvement** in butterfly monitoring (Citizen Science projects)
- **monitoring in „less interesting” but important habitats** (agricultural habitats: arable lands, vineyards, orchards etc.)
- **monitoring in urban habitats** (gardens, parks)
- **incorporating it into the National Biodiversity Monitoring Scheme** (the state-funded monitoring and reporting system on Natura 2000 spp.)
- **helping/complementing the National Biodiversity Monitoring Scheme** (volunteer data for NP's, rangers)
- **taking “snapshots”** (many people doing simultaneous general/single-sp. 15-min counts on a larger site within a short time-frame)
- **using it for certain moths** (*E. ankeraria*, *G. borelii*, *C. thrips*, *E. catax*)



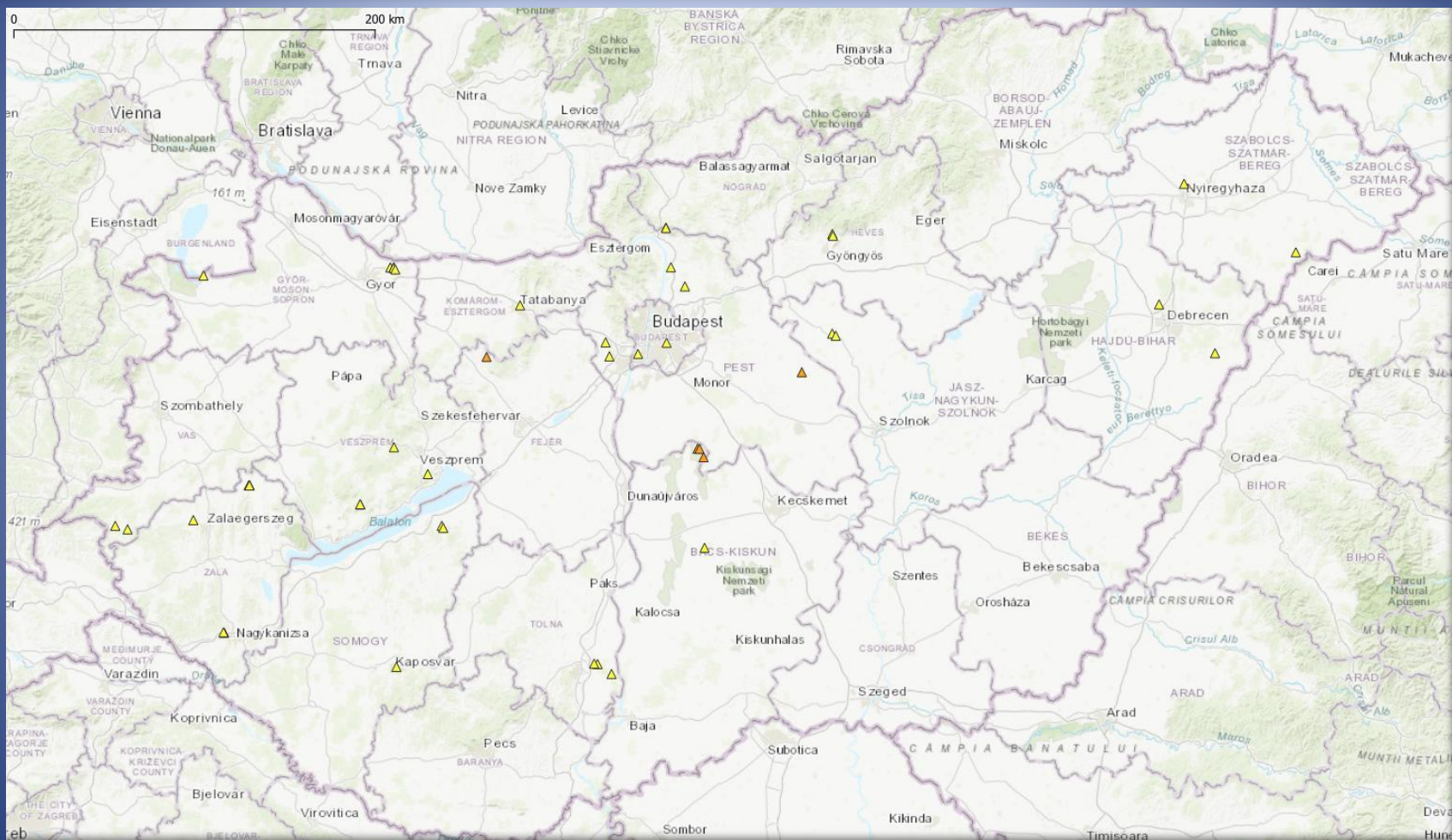
→ as a result:

- **more monitoring data** (gap filling)
- **better monitoring methods** (surpassing opportunistic or systematic presence/absence data) habitats: arable lands, vineyards, orchards etc.)
- **larger scale monitoring**
- **joint and compatible database** (Ministry/HuBMS)
- **acquiring state support for HuBMS** (NP's, Ministry)





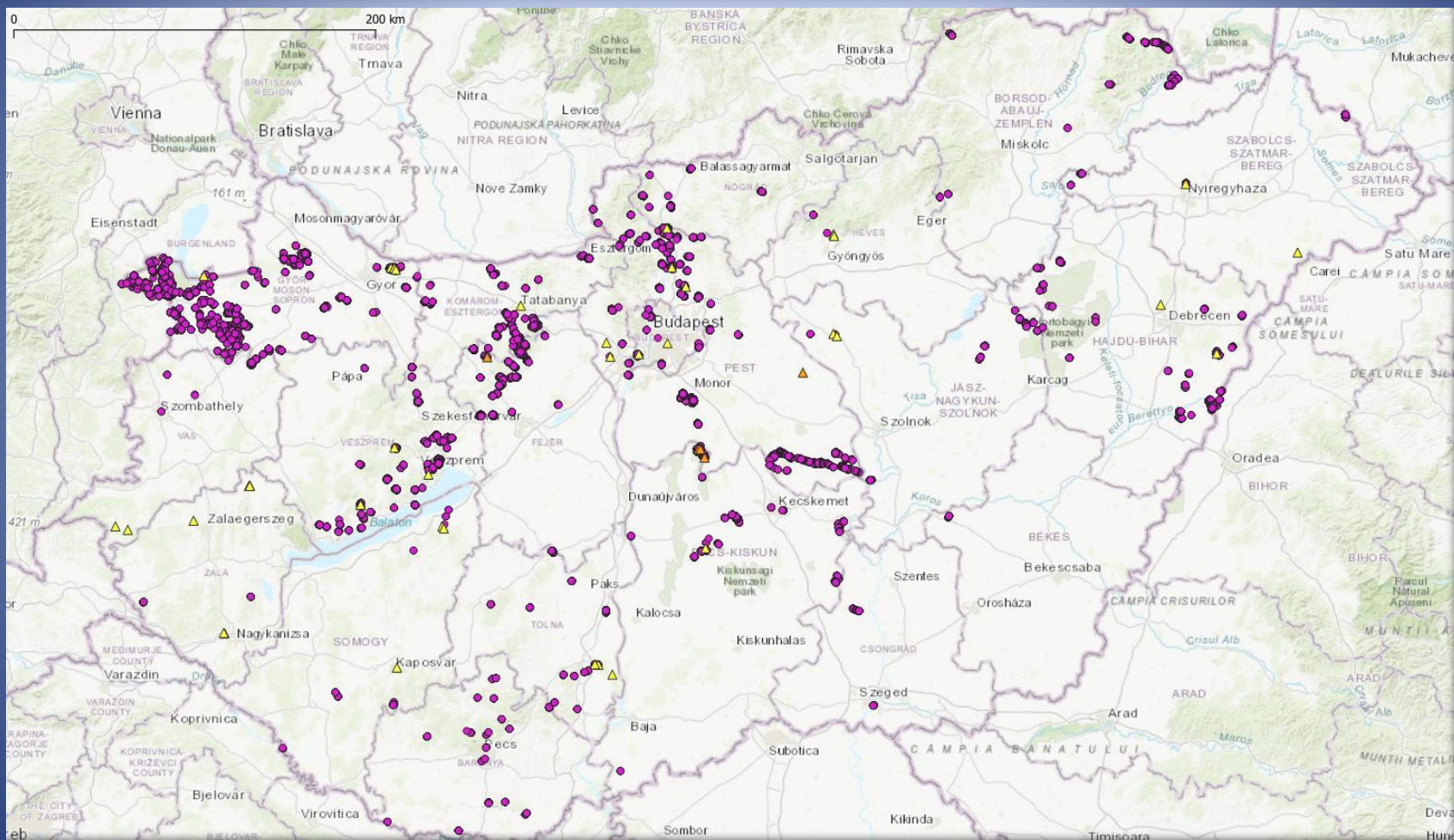
# Transects 2022



**No. of Transects: 30+ (NP-commissioned 12) + targeted 4**




# Transects + Timed Counts 2022



**15-minCounts Samples: 1,135 (2,672); Occurrences: 43,241 (83,702)**

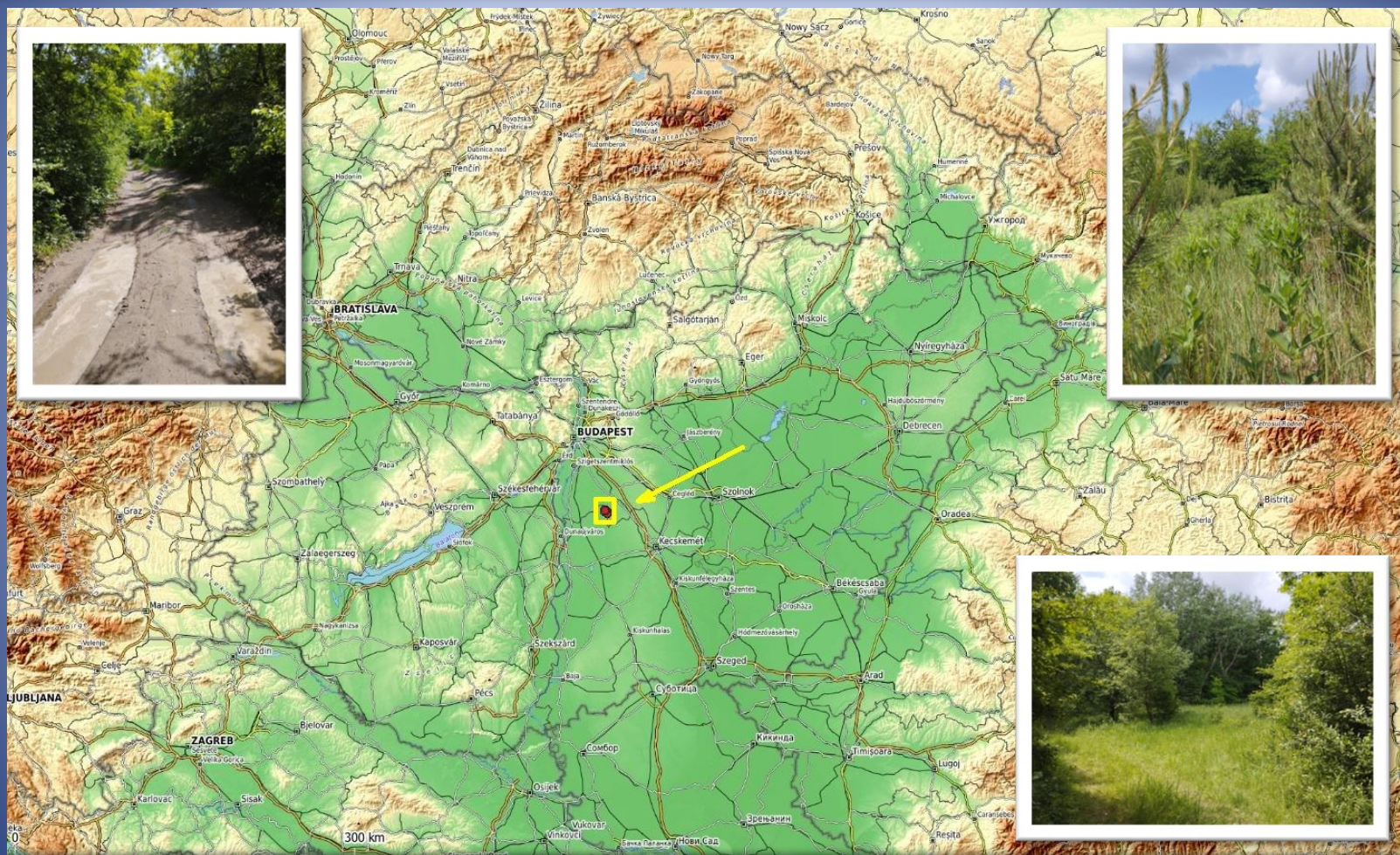
# Moth monitoring methods for Natura 2000 spp

(National Biodiversity Monitoring Scheme)

Scientific name of sp. 	Presence / Absence (A)	Relat. population size (B)	Population size estimate (C)	Research (D)
<i>Catopta thrips</i>	LightTrap/CollectingSheet, Search For PupalSkin	LightTrap, PupalSkinCount (Transect/15-minCount)	PupalSkinCount	Various (CMR)
<i>Glyphipterix loricatella</i>	Search For individuals	-	-	Various
<i>Eriogaster catax</i>	SearchForLarvalWeb	Transect/15-minCount (larval web)	-	
<i>Lignyoptera fumidaria</i>	Search For individuals	Transct, 15-minCount	-	
<i>Chondrosoma fiduciarium</i>	Search For individuals	-	-	Various
<i>Erannis ankeraria</i>	Search For individuals, LightTrap/CollectingSheet	Transct, 15-minCount	CMR	
<i>Phyllometra culminaria</i>	Search For individuals	15-min count (fixed point)	-	Various
<i>Euplagia quadripunctaria</i>	Search For individuals, LightTrap/CollectingSheet	LightTrap (standard), Transect	-	
<i>Arytrura musculus</i>	LightTrap/CollectingSheet	LightTrap (standard)	CMR	Various
<i>Cucullia mixta lorica</i>	LightTrap/CollectingSheet		-	
<i>Gortyna borelii</i>	Search For individuals (larva: feeding marks / imago), LightTrap/CollectingSheet	Transect (larva feeding marks / imago)	AreaCount (random square), CMR	Various (method check)
<i>Polymixis rufocincta</i>	LightTrap/CollectingSheet	LightTrap (standard)		
<i>Dioszeghyana schmidtii</i>	LightTrap/CollectingSheet	LightTrap (standard)	CMR	



## "Snapshots" : *E. matura* - Kunpeszér



**iconic site, ongoing MRR study + targeted transects >> 15-min counts**



# "Snapshots" : *E. maturna* - Kunpeszér



May 26, 2022: 1 pers., 4hrs, *E. maturna* occurrences = 33



## "Snapshots" : *E. maturna* - Kunpeszér



Jun 4, 2022: 11 people preferably in pairs, 2hrs, samples > 40



## "Snapshot" : *C. oedippus* - Ócsa



Jun 25, 2022: 12 people preferably in pairs, 2hrs,  
general+single sp. 15-min counts



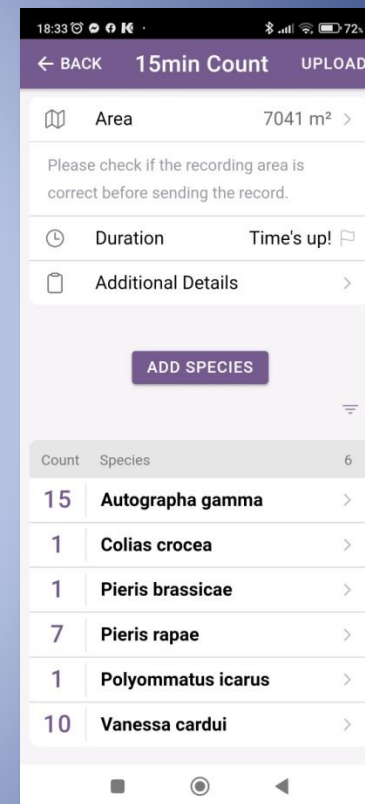
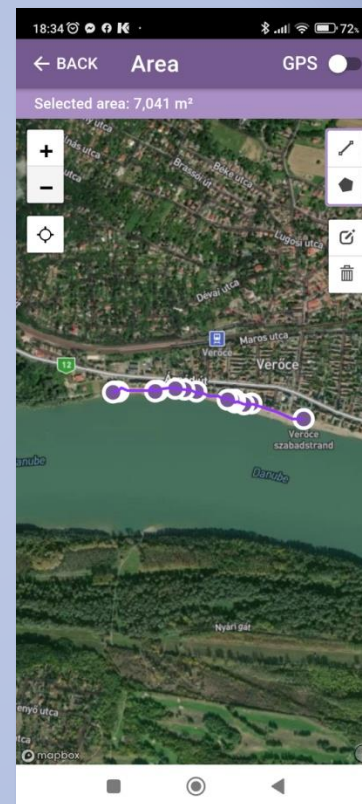
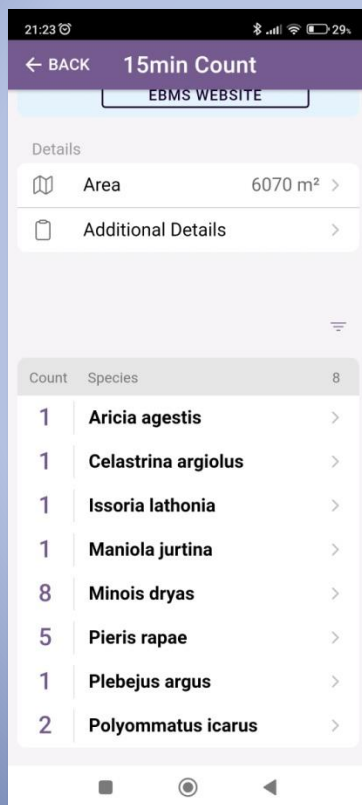
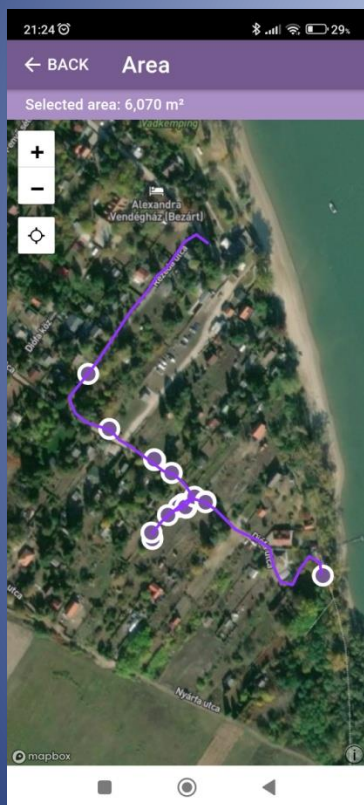
## "Snapshot" : *C. oedippus* - Ócsa



Jun 25, 2022: samples > 40 records > 1,000

# Urban green monitoring

Oct 16, 2022, Verőce, Danube banks



Jul 16, 2022, Pilismarót, „Danube Plunge” Green Festival



# Dangers

Records Species								
ID	Src	Species	Common name	Count	Location	Lat/lon	Date	Recorder
								Peszér, ?
26180783	118 565	<i>Charaxes jasius</i>	Two-tailed Pasha	1		47.088N 19.315E	01/07/2022	Peszér, ?
26180782	118 565	<i>Parnassius apollo</i>	Apollo	1		47.088N 19.315E	01/07/2022	Peszér, ?
26180781	118 565	<i>Parnassius apollo</i>	Apollo	1		47.088N 19.315E	01/07/2022	Peszér, ?
26180780	118 565	<i>Charaxes jasius</i>	Two-tailed Pasha	1		47.088N 19.315E	01/07/2022	Peszér, ?
26180779	118 565	<i>Danaus plexippus</i>	Monarch	1		47.088N 19.315E	01/07/2022	Peszér, ?
26180778	118 565	<i>Danaus plexippus</i>	Monarch	1		47.088N 19.315E	01/07/2022	Peszér, ?
26180777	118 565	<i>Charaxes jasius</i>	Two-tailed Pasha	1		47.088N	01/07/2022	Peszér, ?

➤ Any need that is not accomodated will be through some workaround ...

➤ 15-minute counts considered as a replacement of more effort intensive transects

## The future >> where to go?

- transect/timed count integration
  - >> eBMS app to register transect occurrences with GPS coordinates
- limited area (5x5x5 metres) / not limited area
  - >> opt for non-limited
- integrating other taxa and single spp.  
(Bumblebees, Dragon flies already there
  - >> Antlions (*Myrmeleontidae*), Macaronius owlfly (*Libelloides macaronius*), Cone-headed grasshopper (*Acrida ungarica*), Praying mantis (*Mantis religiosa*)







*Dec 2, 2022 Laufen*