

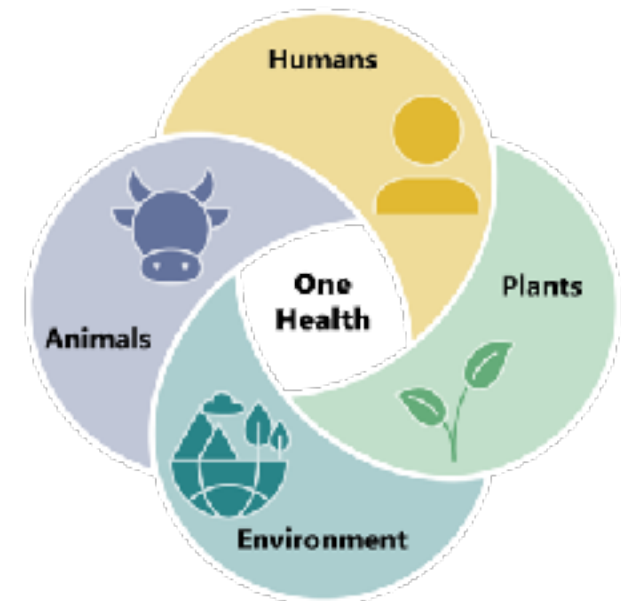


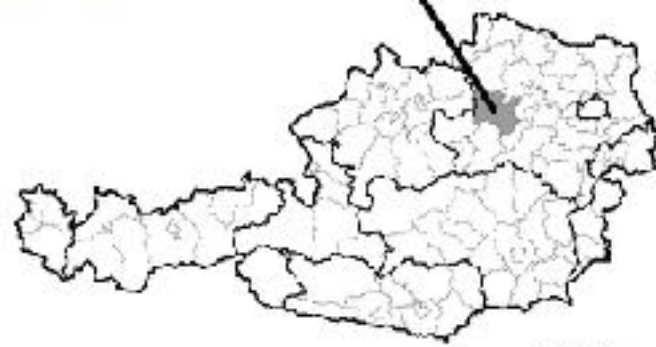
Türkiye Training School and Workshop
11-13 June 2025, Sivas, Türkiye

Hyalomma introduction to northern areas and the challenges and preparations for CCHF

Georg Duscher

AGES – Austrian Agency for Health and Food Safety





0 35 70 140 210 280
Kilometers

Austria



RAPID COMMUNICATION

Adult *Hyalomma marginatum* tick positive for *Rickettsia aeschlimannii* in Austria, October 2018

Georg Gerhard Duscher¹, Adnan Hodžić¹, Peter Hofnagel², Walpurga Wille-Piazza³, Anna-Margarita Schikla⁴, Mateusz Andrzej Markowicz⁴, Agustín Estrada-Peña⁴, Gerold Slanek⁴, Franz Allerberger²

¹. Institute of Parasitology, University of Veterinary Medicine Vienna, Austria

². Institute for Medical Microbiology and Hygiene, Austrian Agency for Health and Food Safety Vienna, Austria

³. Institute for Hygiene and Applied Immunology, Medical University of Vienna, Austria

⁴. Department of Animal Pathology, Faculty of Veterinary Medicine, Zaragoza, Spain

Correspondence: Georg G. Duscher (georg.duscher@vetmeduni.ac.at)

Citation: <https://doi.org/10.2807/1560-7917.ES.2018.27.46.1000995>

Duscher Georg Gerhard, Hodžić Adnan, Hofnagel Peter, Wille-Piazza Walpurga, Schikla Anna-Margarita, Markowicz Mateusz Andrzej, Estrada-Peña Agustín, Slanek Gerold, Allerberger Franz. Adult *Hyalomma marginatum* tick positive for *Rickettsia aeschlimannii* in Austria, October 2018. *Euro Surveill* 2018;23(46):1000995. <https://doi.org/10.2807/1560-7917.ES.2018.27.46.1000995>

Article submitted on 20 October 2018 / accepted on 29 November 2018 / published on 29 Nov 2018

2.10.2018

District Melk
10y Haflinger mare



<https://www.esa.org/esablog/research/birds-may-expand-the-range-of-lyme-disease-and-its-vector-tick/>

Migratory birds

Estimation: 2.1 billion birds in europe yearly

(Hahn et al. 2009)

11% of birds carry *Hyalomma* spp.

3% of birds carry *Rickettsia aeschlimannii*
positive ticks

20% of found *Hyalomma* spp. carry spotted-
fever group (SFG)- *Rickettsia*

DISPATCHES

Zoonotic Pathogens in Ticks from Migratory Birds, Italy

Elena Battisti, Katharina Urach, Adnan Hodžić, Leonida Fusani, Peter Hufnagl, Gerit Felsberger, Ezio Ferruglio, Georg Gerhard Duschner

Migratory birds can transport infected ticks across continents. We evaluated pathogens in ticks collected from migratory birds in Italy. We found DNA from *Rickettsia aeschlimannii*, *R. africae*, and *R. zeuthenensis*, all of which can cause disease in humans. Bird migrations might facilitate the spread of these pathogens into new areas.

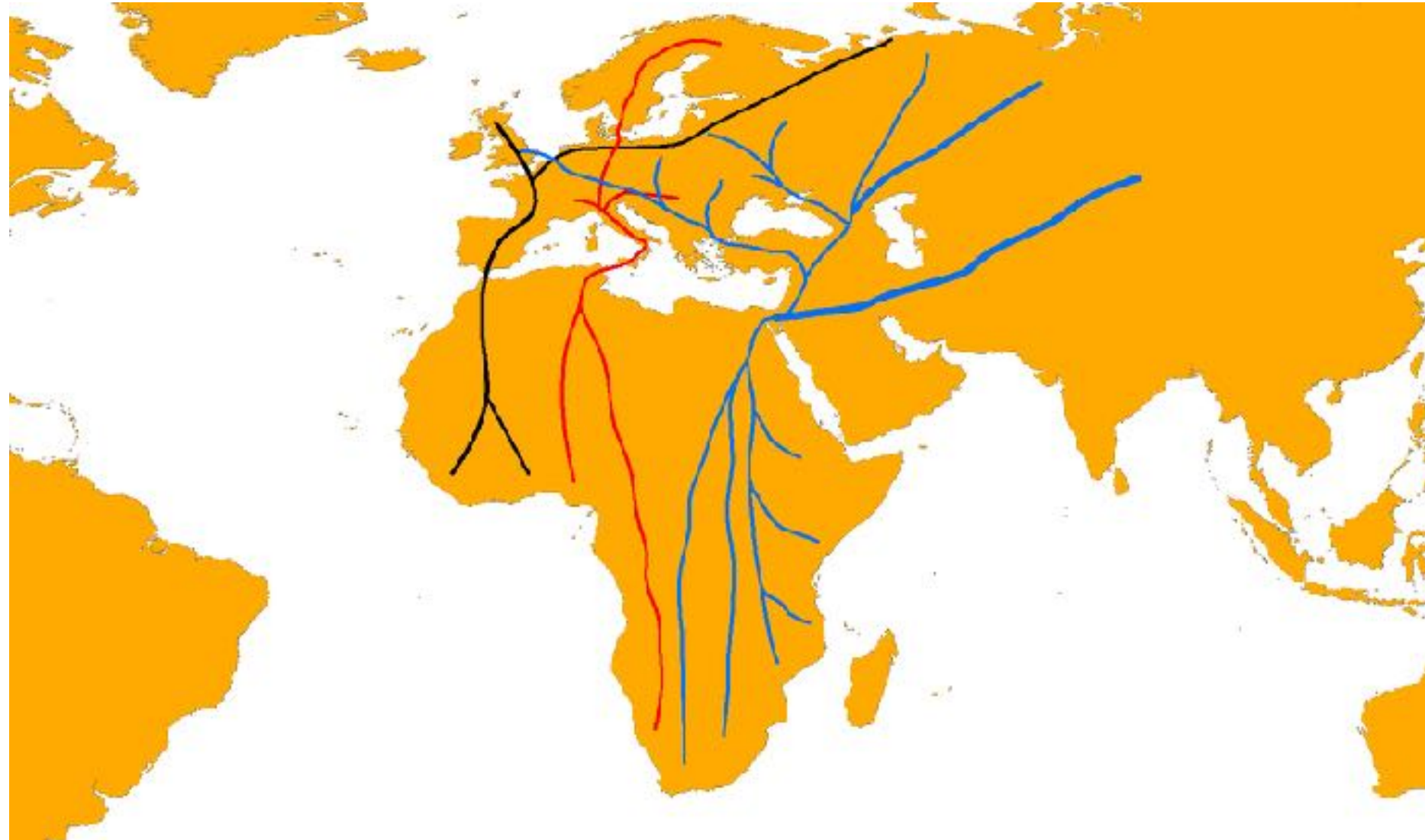
(*Sylvia atricapilla*), the European robin (*Erithacus rubecula*), the song thrush (*Turdus philomelos*), and the subalpine warbler (*Sylvia undulata*).

We collected 231 engorged ticks and identified them using standard morphologic keys (3) and PCR amplification of the internal transcribed spacer (ITS) region when possible (4). We used commercial kits for RNA



AI generated by copilot

Presume routes of migratory birds



15.6.2019



2.10.2018



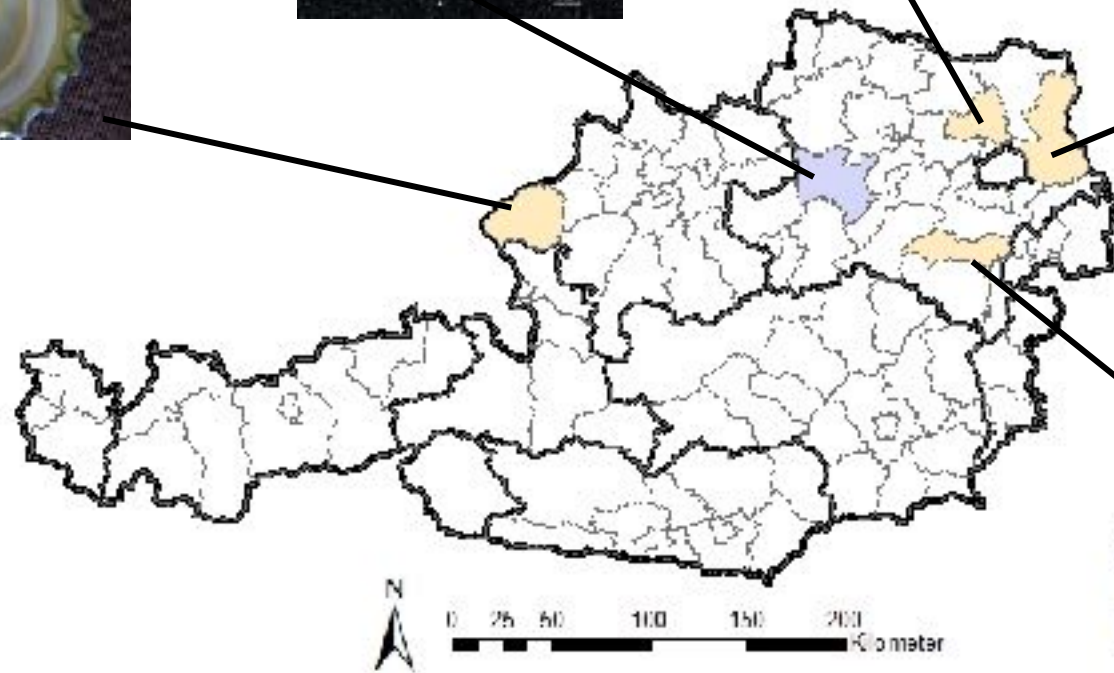
26.4.2019



5.10.2019



28.8.2019



Legende

2019
2018



Article

Hyalomma spp. in Austria—The Tick, the Climate, the Diseases and the Risk for Humans and Animals

Georg Gerhard Duscher ^{1,4}, Stefan Kienberger ² , Klaus Haslinger ² , Barbara Holzer ³, Irene Zimpernik ³, Reinhard Fuchs ⁴ , Michael Schwarz ⁵, Peter Hufnagl ⁶, Peter Schiefer ⁷ and Friedrich Schmoll ³

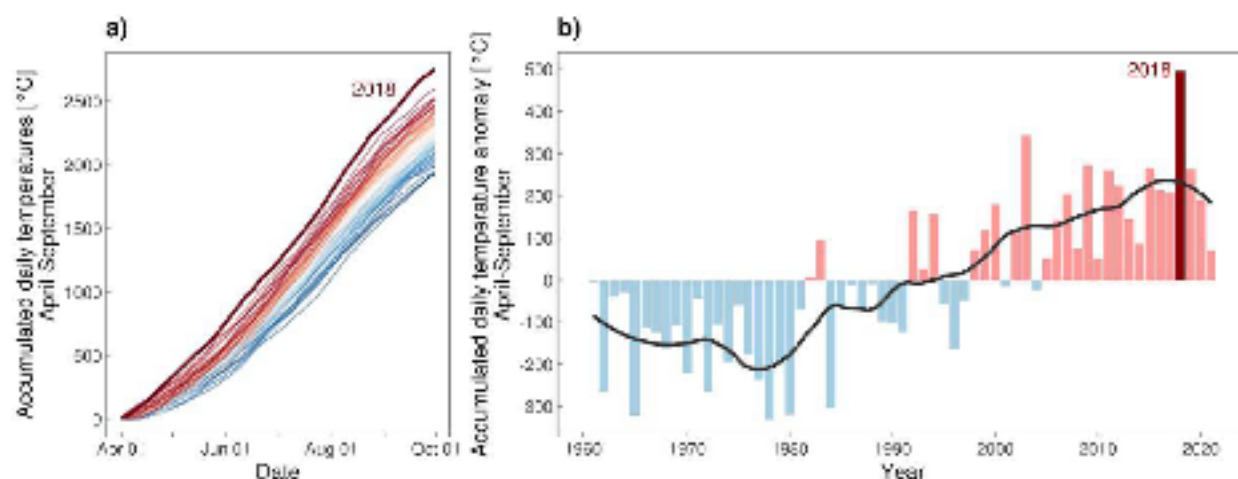
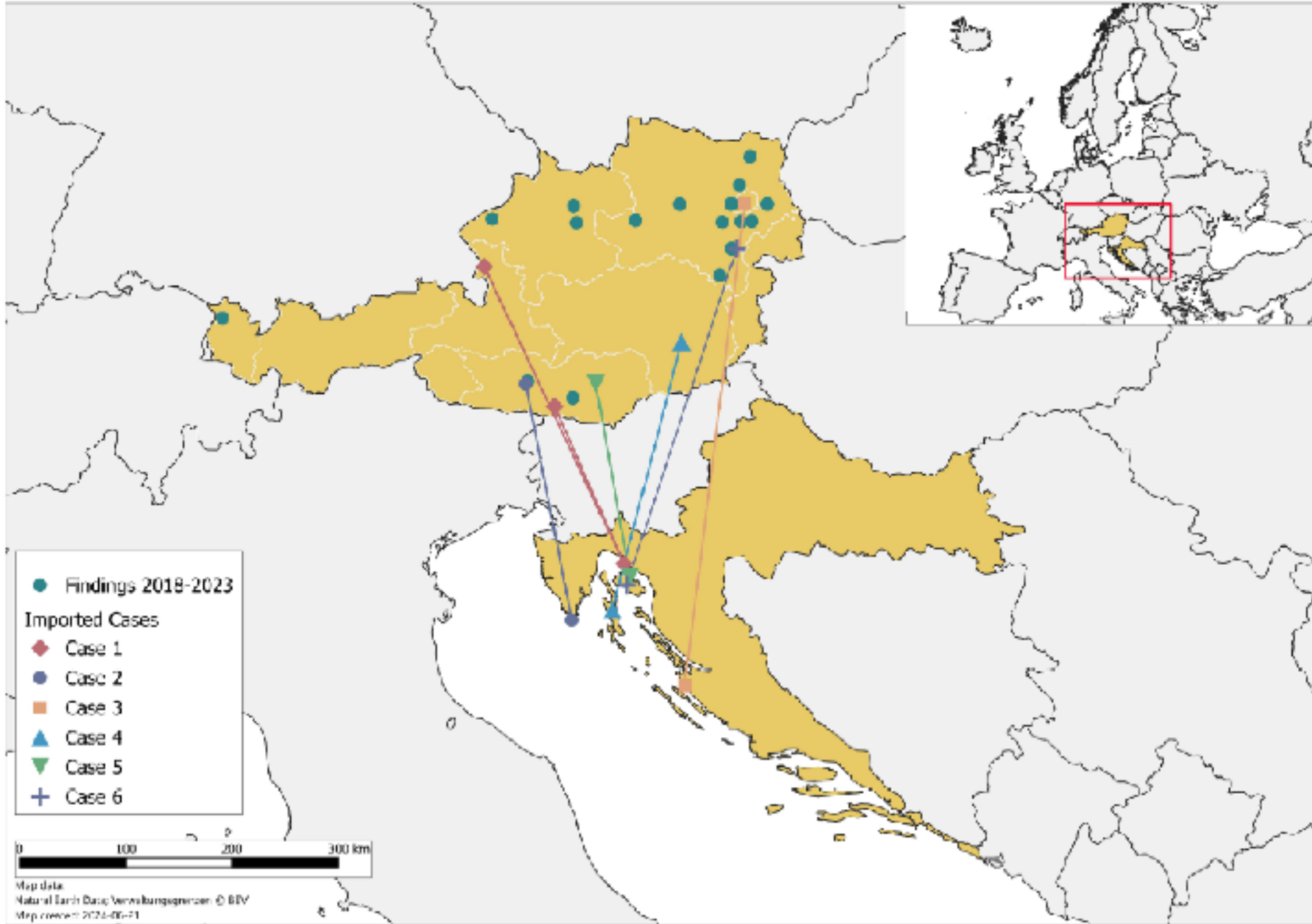


Figure 4. (a) Temporal evolution of accumulated daily temperatures (averaged over the Austrian domain) from April 1st to September 30th for each year from 1961 to 2021; the year 2018 is highlighted in darker red. (b) Accumulated daily temperature anomalies from April 1st to September 30th from 1961 to 2021 relative to the 1961 to 2020 mean; the year 2018 is highlighted in darker red.

Establishment of *Hyalomma* in northern regions?



- Larvae/Nymphs via birds (March-May): ~26 days
- Nymphs drop off and moult to adults: ~21 days (optimal conditions)
- Adults search for hosts (availability of hosts) - eggs overwintering?
- Adults overwinter?
- No ticks below cumulative 3000-3400°C in one year
- No ticks below cumulative 400°C September-December
- Moulting requires cum. 300°C, constant 14-16°C (but also above 8°C for 15 days)
- Tmax above 10°C



AI generated by cop

Another way of migration

Markovics et al. 2024

Hyalomma marginatum - A silent stowaway after vacation at the Adriatic Sea

How to deal with new ticks/new pathogens



©AGES/ Jakob Hlous



Funded by
the European Union

Pilot of a mobile truck






- Field validation of truck
- Information chain
- Visualisation of results
- Countermeasures (following Ebola guidelines)


← → ↺ 🏠 <https://www.derstandard.at/story/3000000270203/entwarnung-ebola-verdacht-in-tschechien-nicht-bestaetigt>

Info-Schirme ... Transparenz ... Settings ... Informationen


SI International > Europa > Tschechien Inland Wirtschaft Web Sport Panorama Kultur Dat Wissenschaft Lifestyle mehr...




+9.959 %
seit 30.04.2013



+42,8 %
Ø-Perf. pro Jahr



157,50 Mio.
Investiertes Kapital (EUR)



+23,6 %
Ø-Perf. pro Jahr

wikifolio Top-Performer entdecken

15 Postings



KRANKHEIT

Entwarnung: Ebola-Verdacht in Tschechien nicht bestätigt

Nach der Rückkehr von einer Afrika-Reise wies ein US-Amerikaner Symptome der hochinfektiösen Krankheit Ebola auf. Auf die klärenden Tests wurde bis spät in die Nacht gewartet

18. Mai 2025, 07:34

15 Postings

Später lesen



Outcome



- Mobile truck could help to enhance lab capacity, but many legal aspects have to be solved
- Mobile truck might be too slow in unknown situations in region where there is a well established logistic system
- Workflow, information chain and responsibilities are rather unclear

Austrian Agency for Health
and Food Safety



Georg Duscher

Animal Health

Robert-Kochgasse 17

A-P2340 Moedling

M +43 (0) 664 9668350

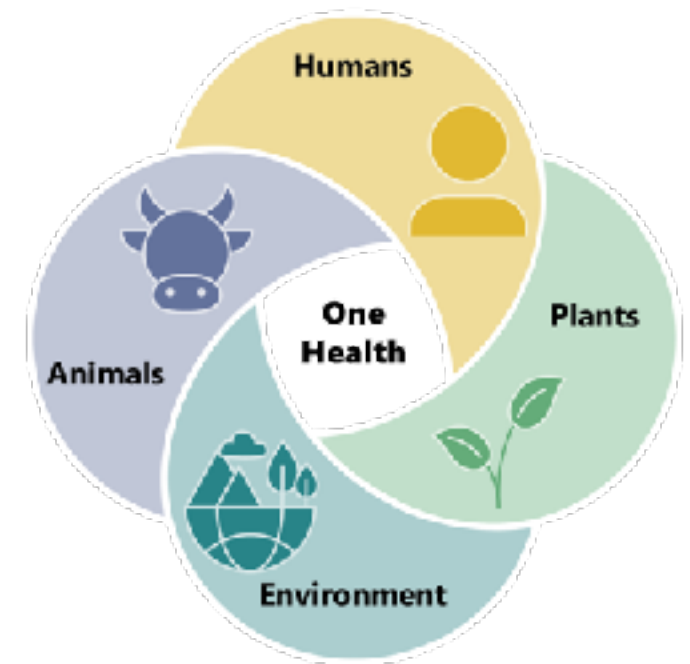
Georg.duscher@ages.at

www.ages.at

202

Copyright ©5

AGES/
Georg Duscher



Austrian Agency for Health
and Food Safety



Name

Bereich



Pictures: Christina Fink, Asvola, Monkey Business Images, malshkoff/Shutterstock.com