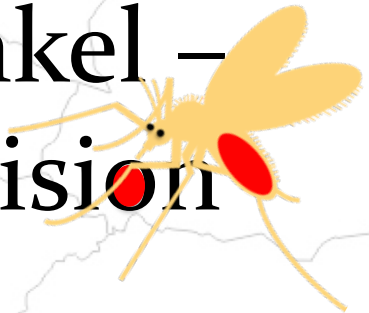
MEDIZINISCHE UNIVERSITÄT WIEN

Sandmücken im Seewinkel – Realität oder Zukunftsvision



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Medizinische Universität Wien

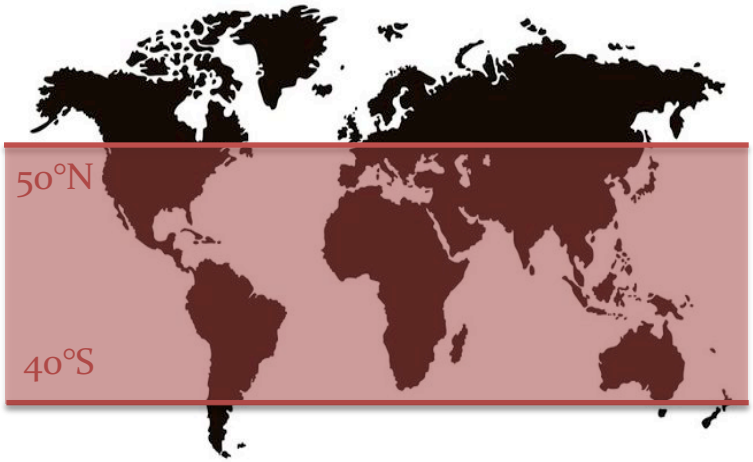
Nationalpark-Forschungstag, Illmitz 2019

bundesheer.at

Sandmücken

- Insecta
  - Diptera
    - Nematocera
      - Psychodidae
        - Phlebotominae

- >800 Arten
- weltweit
- 50°N bis 40°S
- 300 m unter bis 3200 m über dem Meeresspiegel



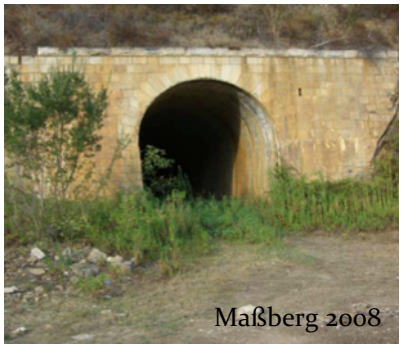
Biologie

- Unterschiedliche aber durchwegs terrestrische Lebensräume
- Temperatur & Luftfeuchtigkeit!!!
- Überwinterung im Ei- oder 4. Larvalstadium


Maßberg 2008


Vivero et al. 2015


Vivero et al. 2015


Maßberg 2008

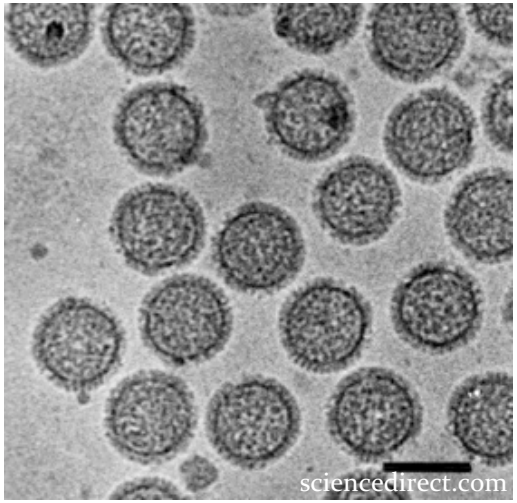

Moncaz et al. 2012


Samy et al. 2014

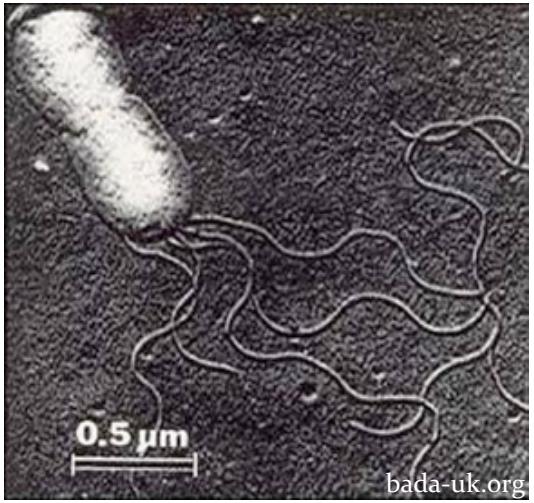

Dvořák et al. 2016

Sandmücken als Vektoren

Arboviren



Bartonella bacilliformis



Leishmania spp.

Die Leishmaniose

- Euglenozoa: Kinetoplastida: Trypanosomatidae
- ~70 Sandmücken-Arten sind bekannte Vektoren
- ~1 Milliarde Menschen leben weltweit in 97 Ländern mit Infektionsrisiko
- Reservoir: Hund, Nagetiere, (Mensch)

kutan

muko-kutan

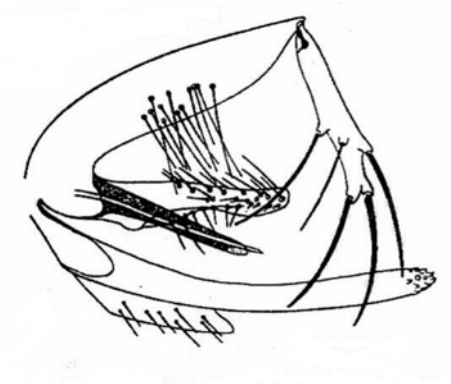
viszeral

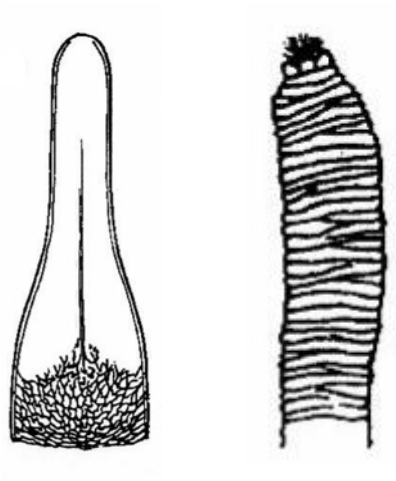
Die Verbreitung der Sandmücken in Mitteleuropa

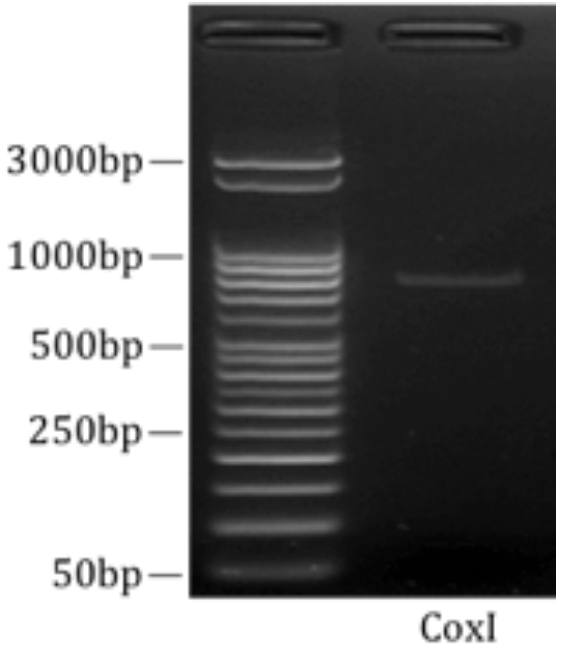
“Phylogeography of Austrian sandfly populations – where do they come from and where will they go?”

- Verbreitung & Ausbreitung
- Biologie & Ökologie
- Phylogeographie

Verbreitung & Ausbreitung







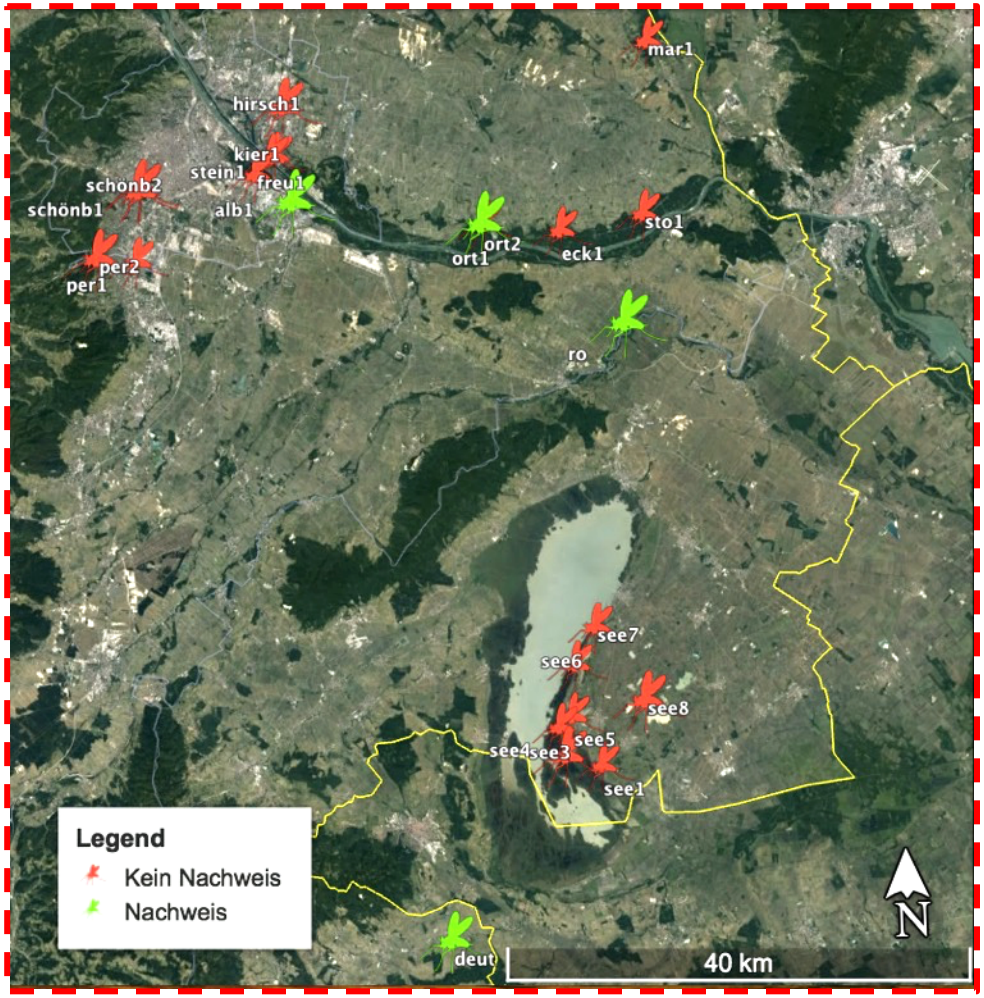
AACTGTTGACCGTACGTAAAT

Verbreitung & Ausbreitung

Sandmücken im Seewinkel?

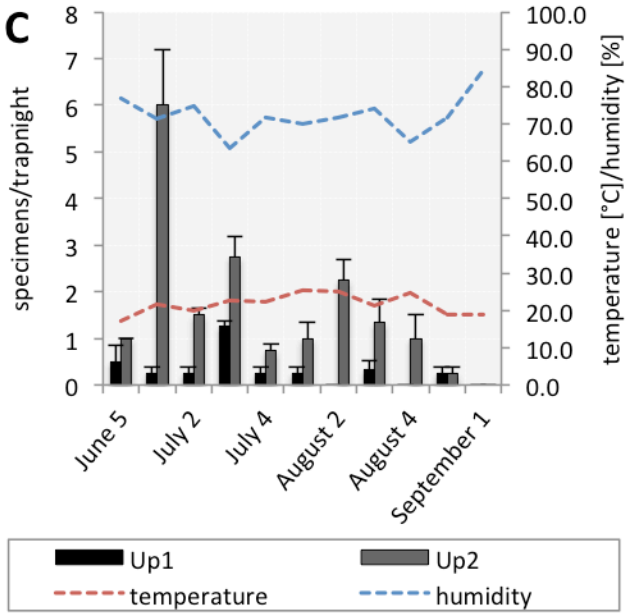
Standorte

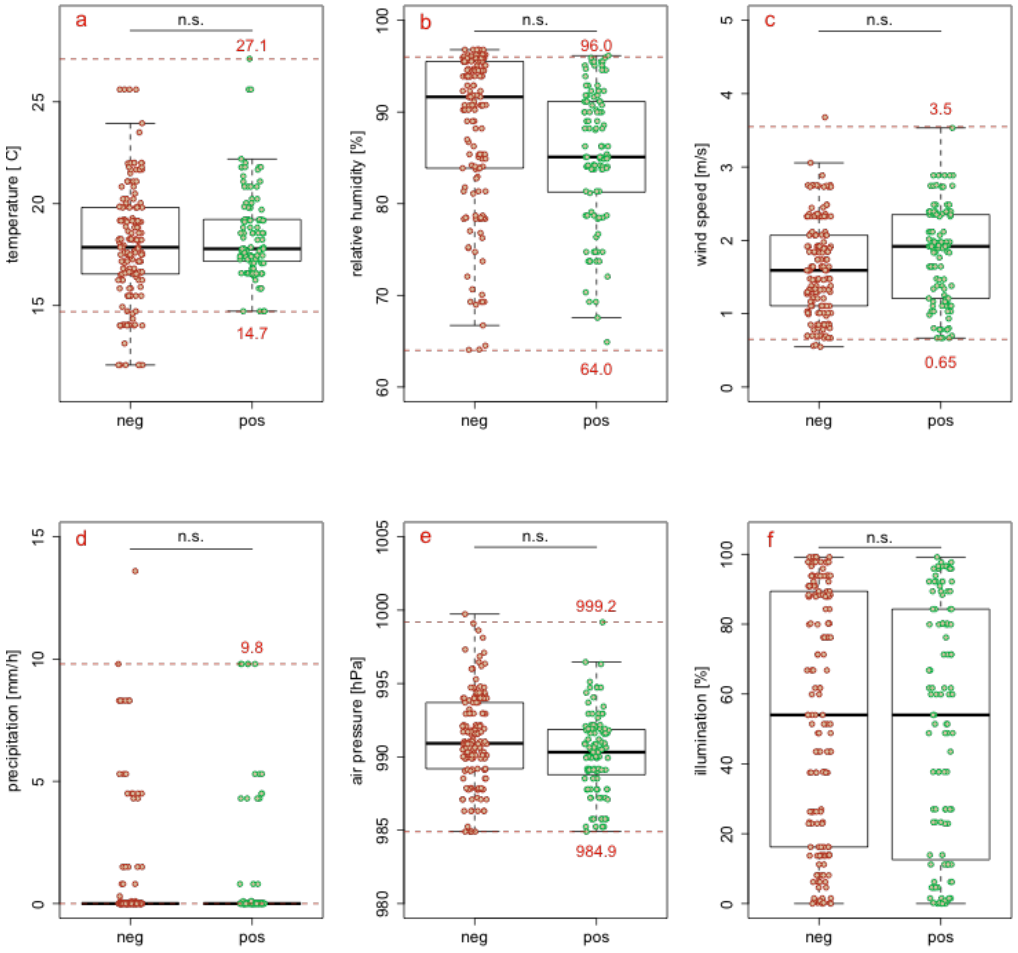
- See1: Apetlon, Graurind
- ~~See2: Apetlon, Rinder~~
- See3: Illmitz, Weiße Esel
- See4: Illmitz, Rinder
- See5: Illmitz, Rinder
- See6: Illmitz, Przewalski
- See7: Illmitz, Mangalitza
- See8: Illmitz, Fleckvieh



Biologie & Ökologie

- Sandmücken-Aktivität
- Klimadaten

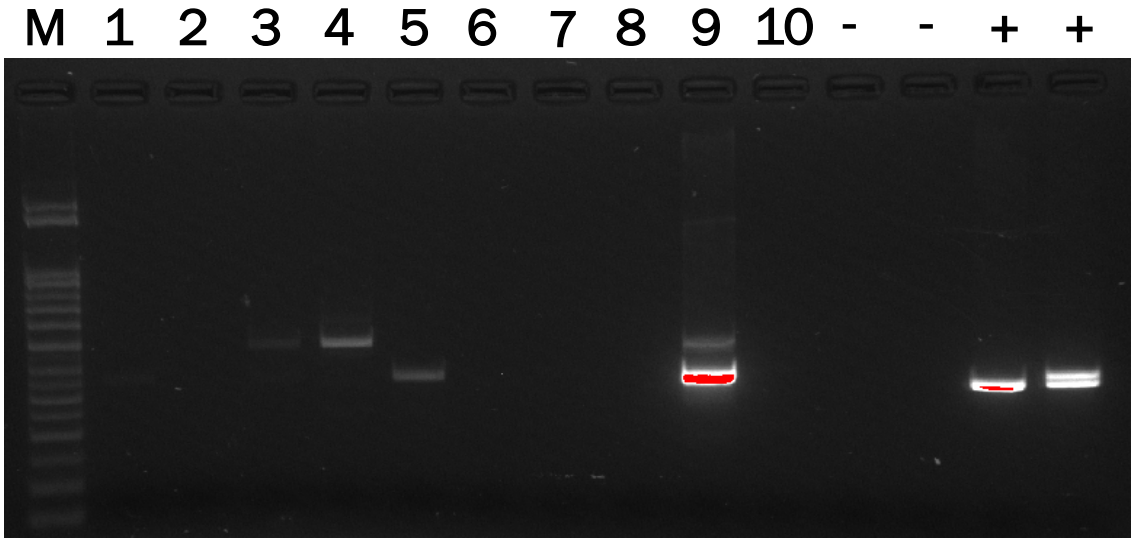




Biologie & Ökologie

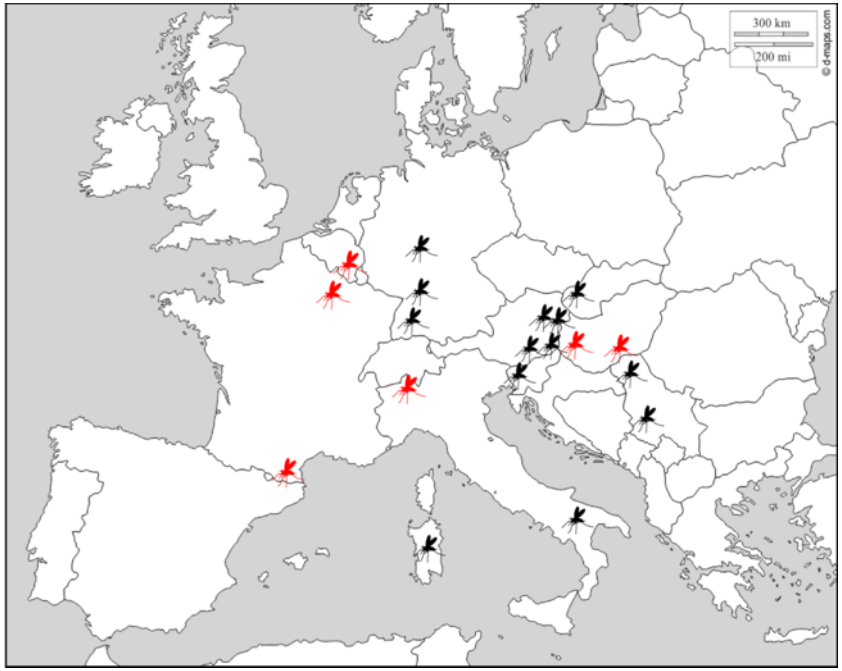
- *Leishmania* spp.- und *Phlebovirus*-Screening

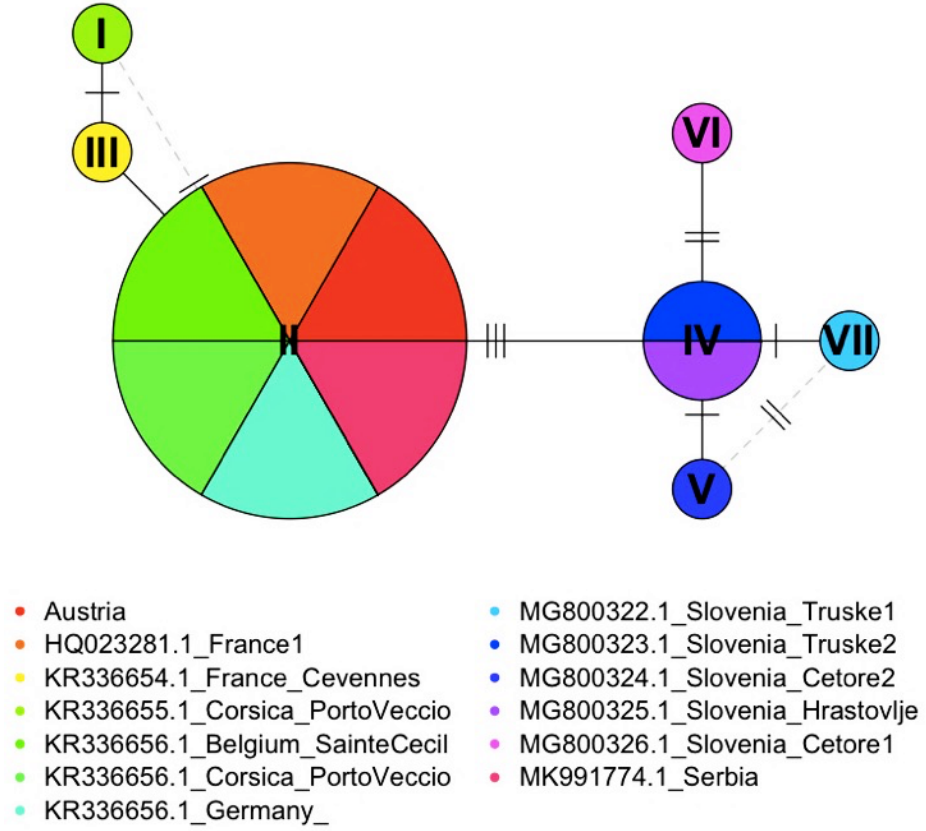
- Blut- und Pflanzenmahlzeit-Analyse



Phylogeographie

- Sandmücken-Sammlung (*Phlebotomus mascittii*)
- Evaluierung geeigneter Gene
- Phylogenie





Zusammenfassung & Ausblick

- Verbreitung & Ausbreitung, Biologie & Ökologie, Phylogeographie
- Ist *Phlebotomus mascittii* ein kompetenter Vektor?
- Leishmaniose = Zoonose (Reservoir!)
- Globalisierung & Klimawandel

Vielen Dank!

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