

A SMARTPHONE APP AGAINST TICKS

Problem – Challenge

Approx. 9'700 accidents with ticks causing costs of 7.7 mio CHF are annually reported to insurers in Switzerland. Appropriate clothing and vaccination can prevent against tick bites and their consequences, however, not everyone active outdoors is vaccinated and up-to date with all relevant information how to deal with tick bites. In addition, the actual occurrence of ticks at specific location is highly variable and depends on the habitat conditions and local recent weather conditions. Providing interactive information on the actual occurrence of ticks at the individual location as wells as basic information on the removal of ticks and symptoms of tick-borne diseases are valuable online support for all outdoor lovers.

Solution

In a CTI project and with additional funding from the Swiss and Liechtenstein's Office of Public Health, researchers from the Institute of Natural Resources and Environment, ZHAW together with Andreas Garzotto GmbH developed an interactive tick-prevention-app. The central element of the app is a dynamic geographic risk mapping for tick bites based on biological, geographical and local weather. The prevalence of tick-borne diseases is not calculated, however local vaccination recommendations are given. How to remove a tick is explained and a "tick bite diary" helps to follow symptoms and gives advice if it ist necessary to consult a doctor. A&K Strategy GmbH has been founded as ZHAW spin-off. The app "Zecke" is the first product of A&K Strategy GmbH, specialised in the application of "tick knowledge".

Headpart of a castor bean tick, *Ixodes ricinus* (SEM, ZHAW-Phytomedizin 2014).



In case of a tick bite, consequences and explanations of the next steps. A tick bite diary to register bites, inclusive *Borrelia* warnings chronologically after 5, 10 and 20 days. The dynamic, tick map with risk analysis functions, a innovation of A&K Strategy GmbH.

