# **Department of Life Science**

# **Ecology of Vector-Borne Diseases**

We are particularly interested in how socioeconomic change can have downstream effect on human risks to vector-borne diseases via a change in land use. Recent research has focused mainly on disease vectors that are also parasites of wild animals (chigger mites, hard ticks, fleas, etc.) due to my former training as a wildlife biologist (mammologist). Our members also work on ecology of Taiwanese mosquitoes and farming practice consequence for animal community.

#### Techniques used in study

Trapping, lots of rodent trapping and field work





We demonstrated that socioeconomic change can often have unexpected consequence for vector—borne diseases; e.g. Taiwan's acceding to World Trade Organization has created a landscape that facilitates the surge of mite-borne scrub typhus.

**Chi-Chien Kuo**, Associate Professor Department of Life Science cckuo@ntnu.edu.tw

#### **Background:**

Ph.D. in Graduate Group in Ecology, University of California, Davis, CA.

## Funding:

Taiwan Ministry of Science and Technology



## **Publications**

- Wei CY, Wang JK, Shih HC, Wang HC & Kuo CC. 2020. Invasive plants facilitated by socioeconomic change harbor vectors of scrub typhus and spotted fever. PLoS Neglected Tropical Diseases 14: e0007519.
- Kuo CC, Huang JL, Shu PY, Lee PL, Kelt DA & Wang HC. 2012. Cascading effect of economic globalization on human risks of scrub typhus and tick-borne rickettsial diseases. Ecological Applications 22: 1803-1816.

