



Julius Kühn-Institut

Bundesforschungsinstitut für Kulturpflanzen
Federal Research Centre for Cultivated Plants

Entomologist with
hammer and envil –
Entomological trapping methods

Stefan Kühne



Field of research

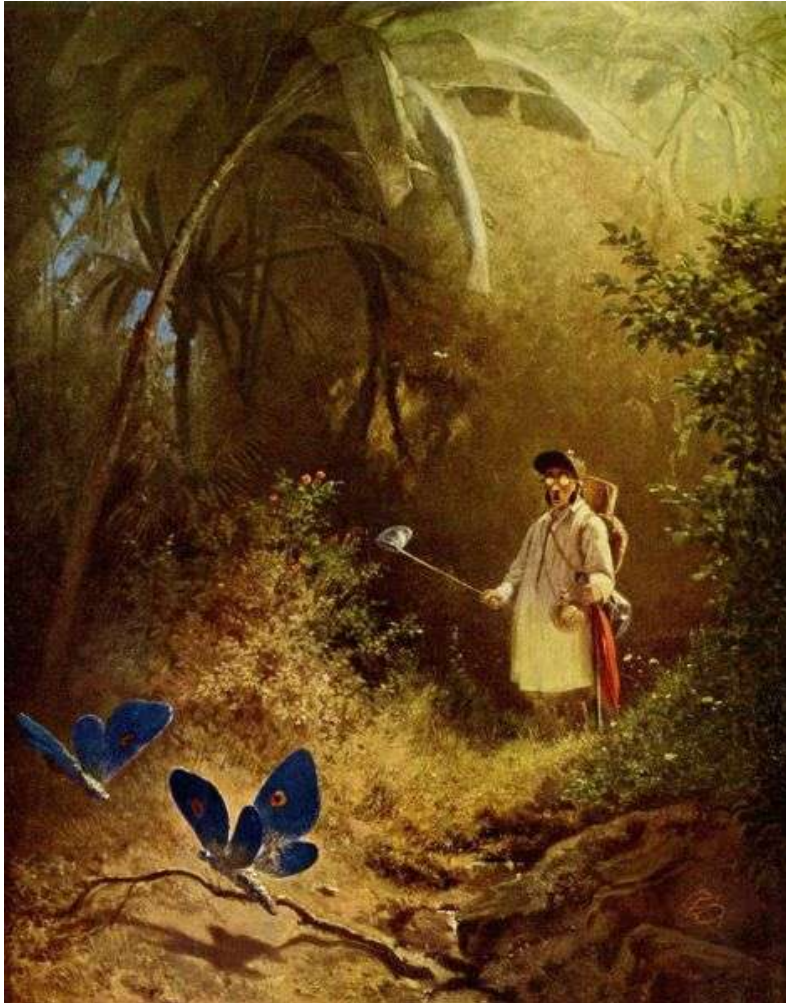
- Entomologist
- Development of plant protection in organic farming
- beneficial / pest interactions

Honorary Professor at University for Sustainable Development Eberswalde

Assistant Professor at Humboldt-University Berlin,
Agricultural Department

Catch insect but how?

- Insect net



Carl Spitzweg: ‚Schmetterlingsfänger‘ – der blaue Moment (1840)

Catch insect but how?

- Insect net

Numer of species

Experimental station

Dahnsdorf

Wildbees

94

Hover flies

49



Photo collector



Predatory flies



Stilpon nubila



Platypalpus pallidicornis



Platypalpus annulatus

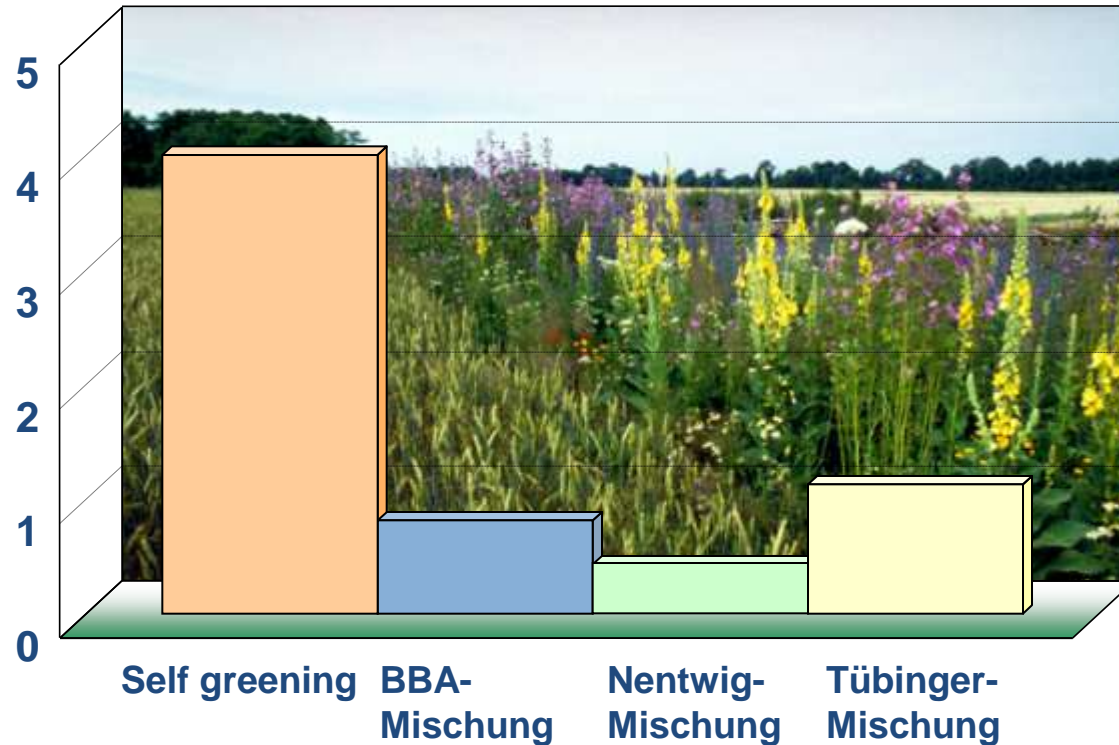


Platypalpus pallidiventris

Grasshoppers



Mean number of grasshoppers / m²



18./19. August 2004



Ch. brunneus 10 % (82=100 %)

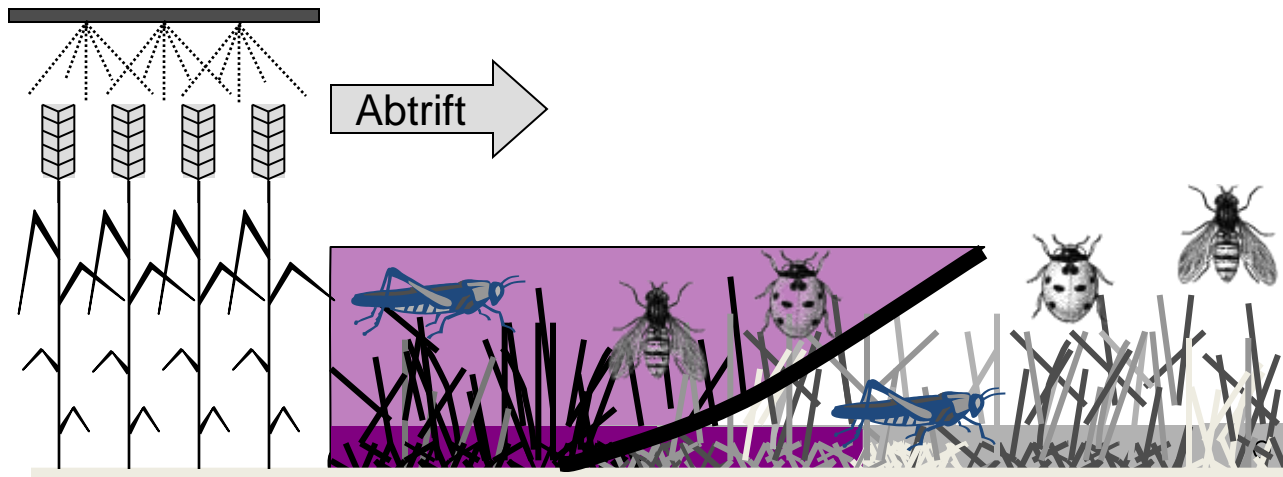


Ch. dorsatus 23 %

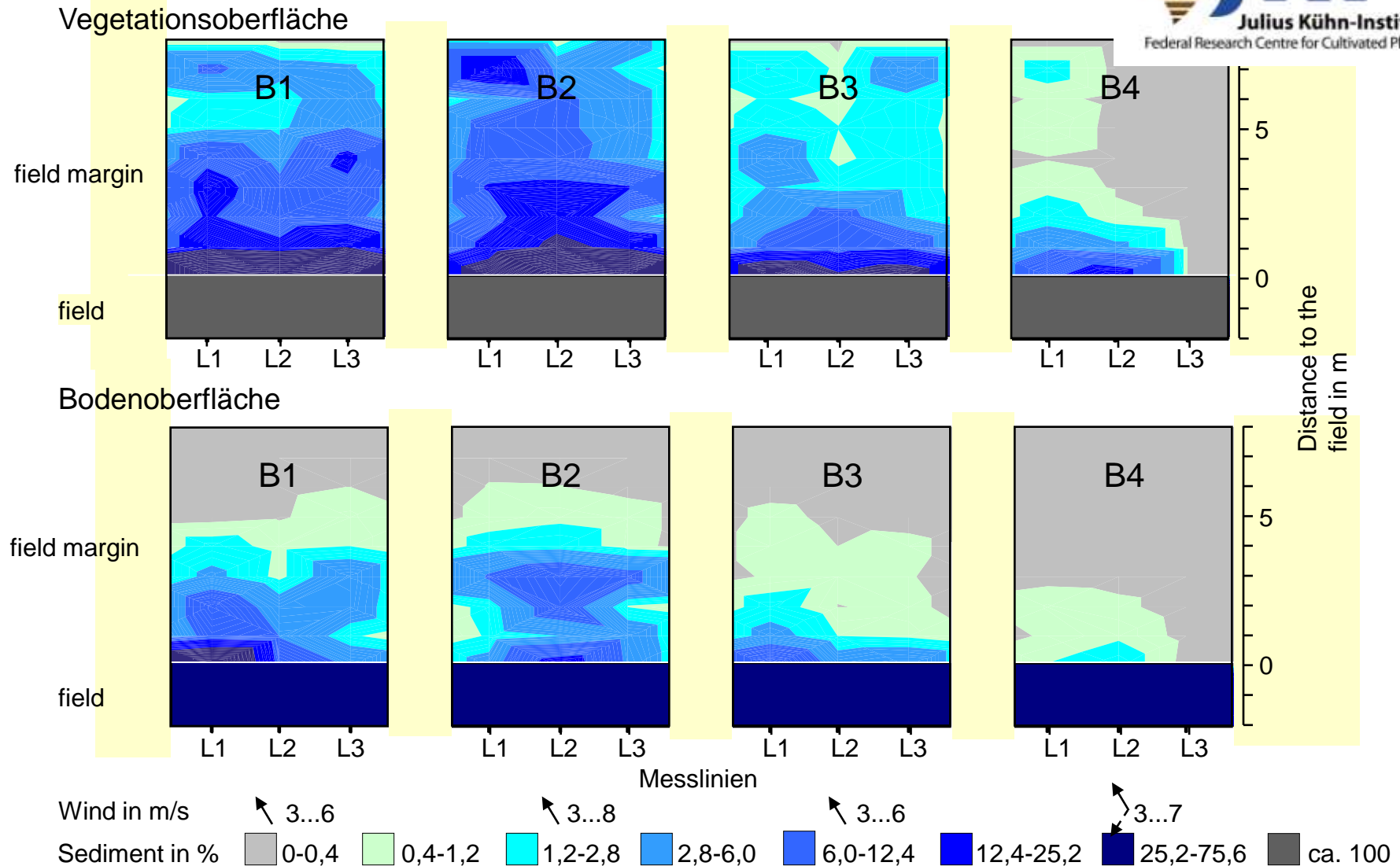


Ch. apricarius 40 %

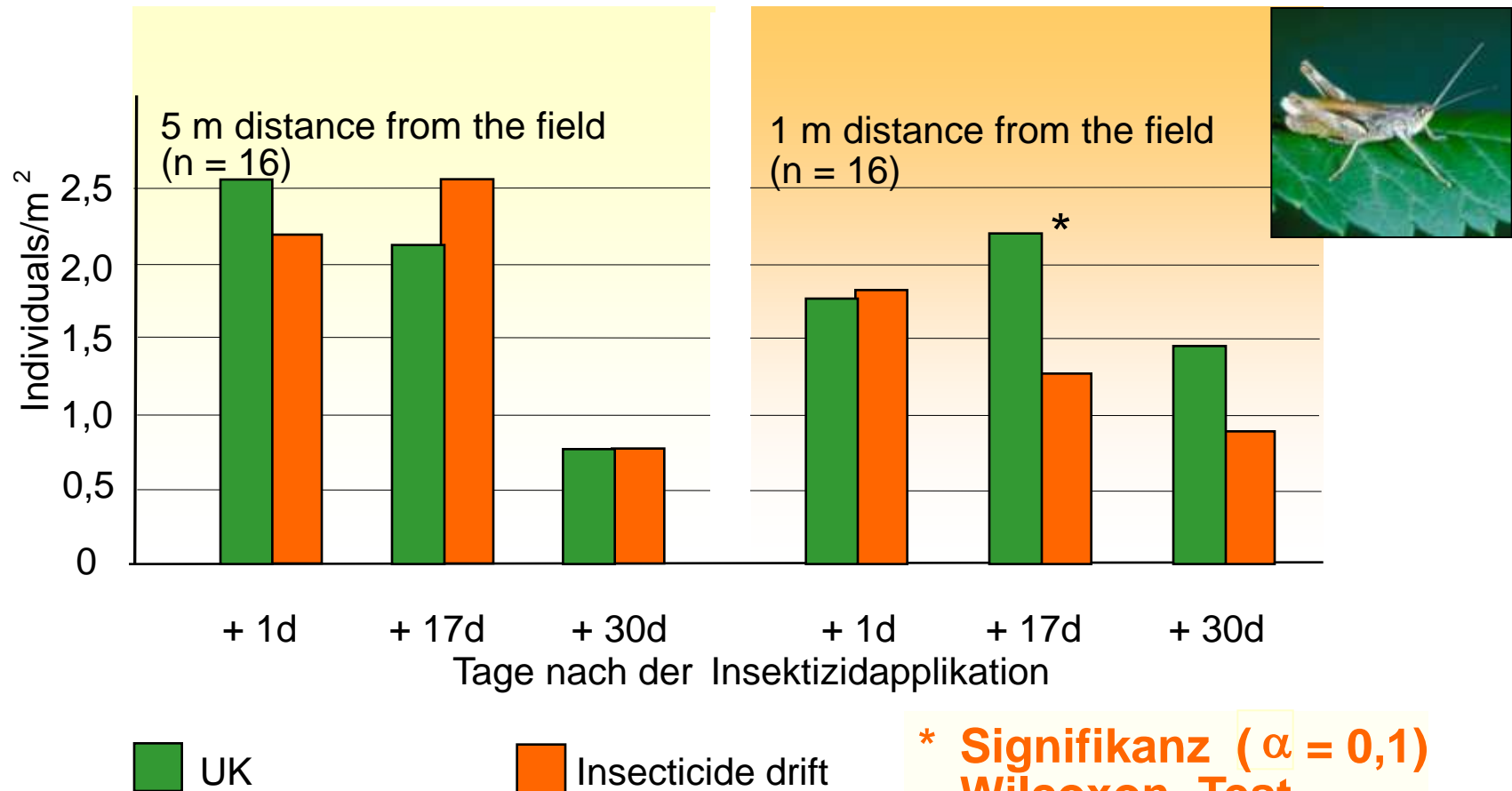
Study about the effect of insecticide drift on grasshoppers in field margin



Distribution of insecticide drift on the field margin



Density of grasshoppers in the field margin after insecticide application on the field

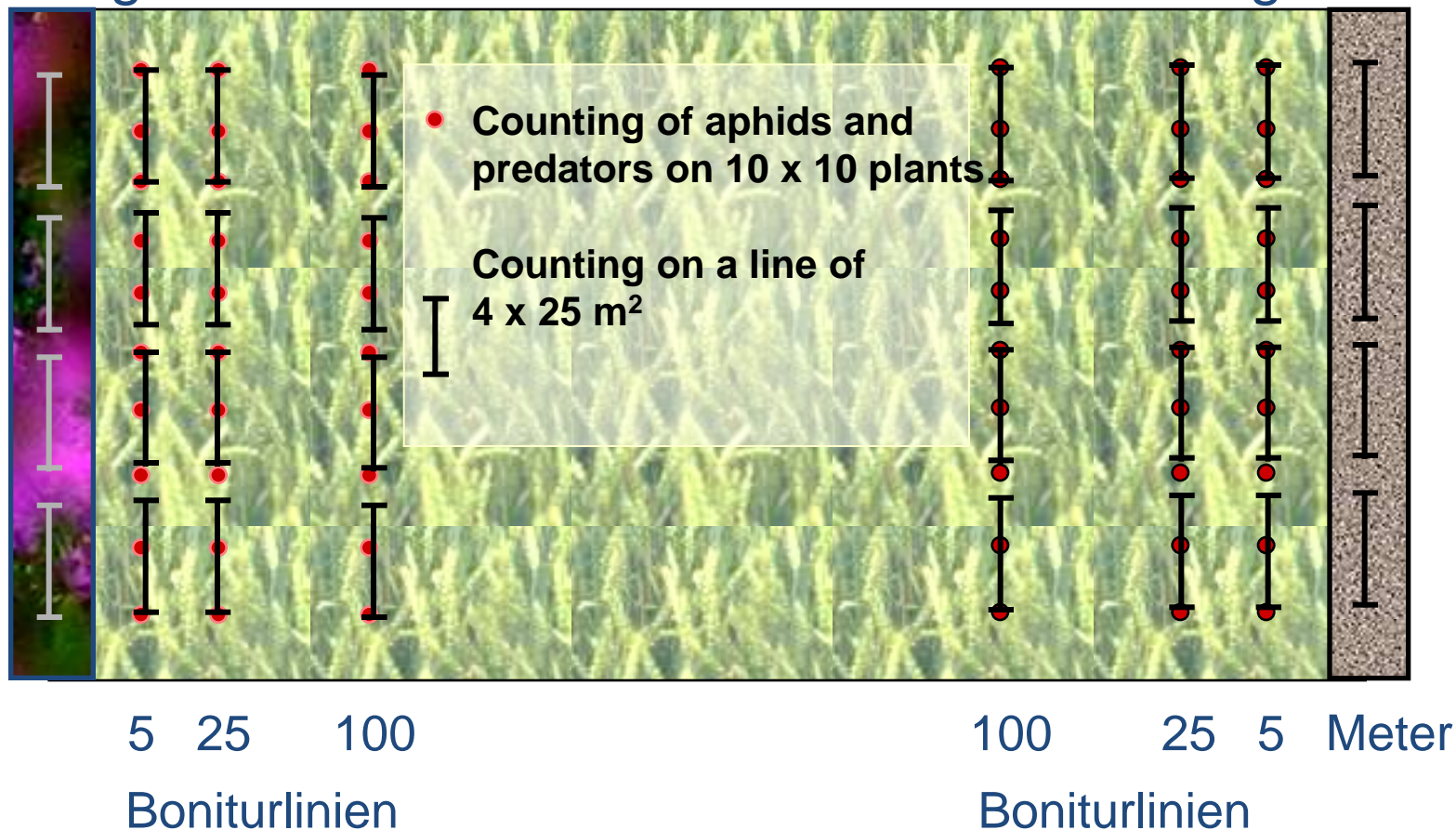


*** Signifikanz ($\alpha = 0,1$)
Wilcoxon -Test**

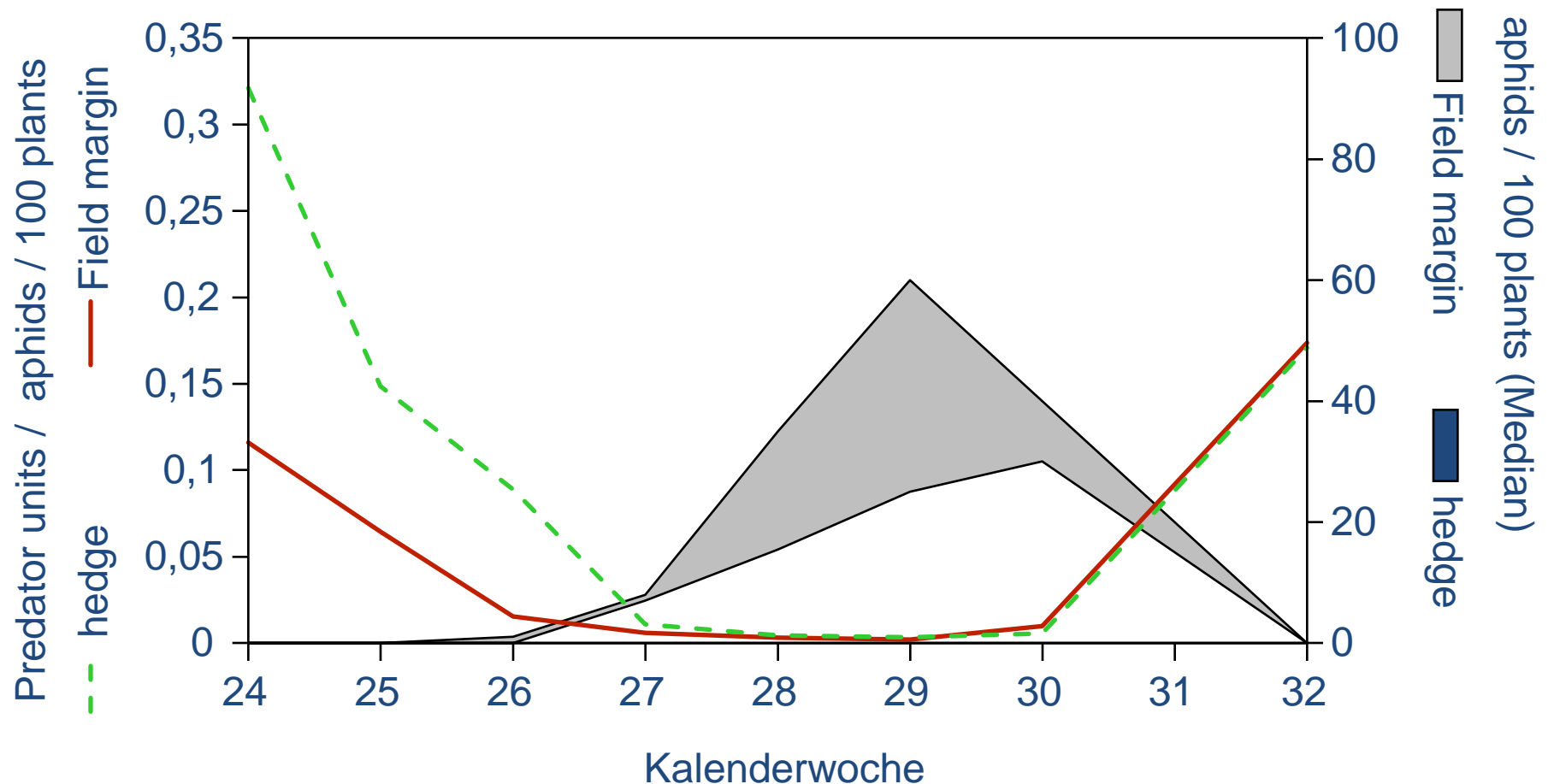
Counting-methods

hedge

Field margin



Predator – prey relationship and aphid density, corn, in field depth of 100 m, 1996



Kings garden of Thailand 1999



Malaise-trap in the kings garden



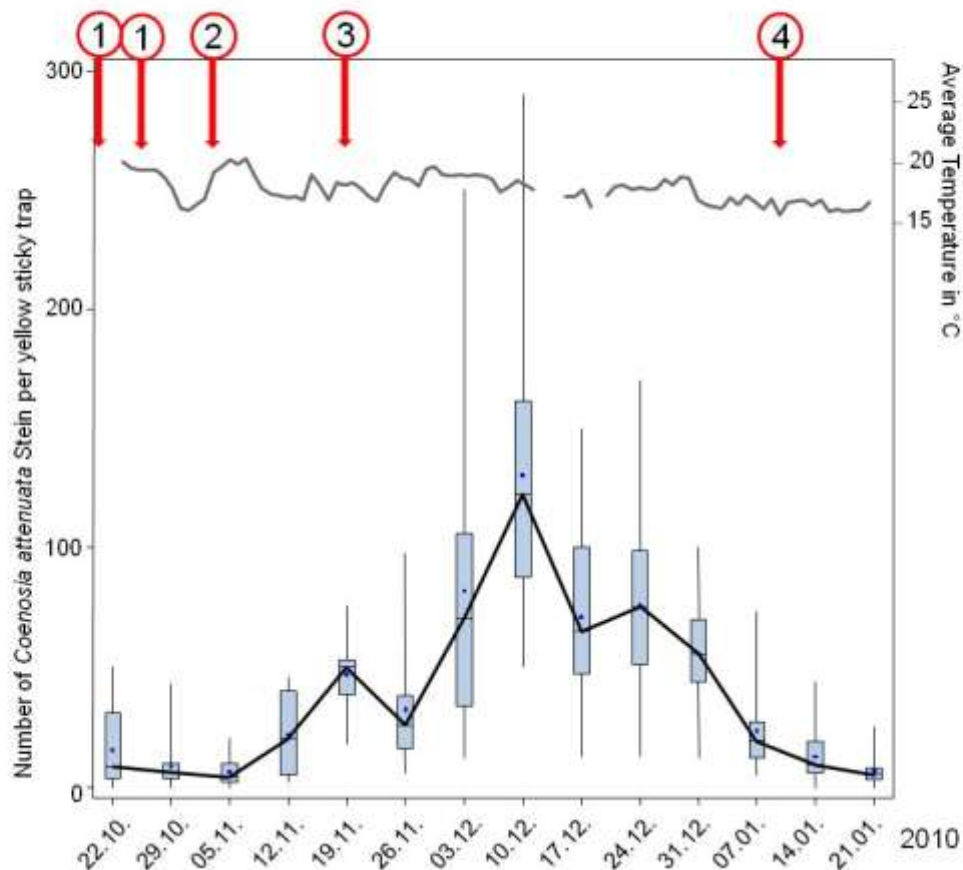
Color-traps



2009 – potherbs, Antalya, Turkey



Fluctuation in population of *Coenosia attenuata* Stein under greenhouse conditions in herbs with reduced pesticide use



- 1: Plenum (pymetrozin) 60 gr/100 lt water
- 2: NeemAzal-T/S (azadirachtin) 300 cc/100 lt water,
- 3 Laser (spinosad) 35 cc/100 lt water,
- 4 Spruzit (pyrethrum) 100 cc/100 lt water.



Production of special entomological equipment – the forge



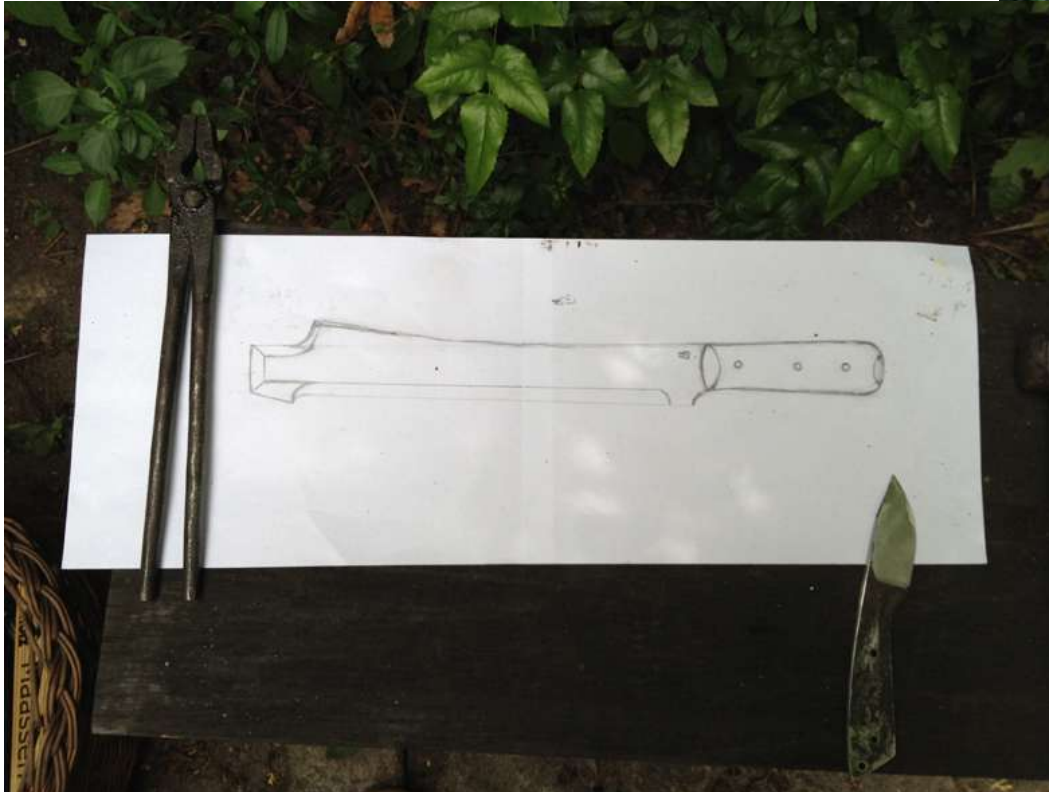
Smith`s hearth

production of special entomological equipment – the workshop



Mai 2012

1. Berlin entomologist smithing



Michael Homburg
Buprestis I der Entwurf
Machete and chisel

Buprestidae - Jewel beetles

13.000 species often with a metallic sheen

Breffer warm regions, in Europe only about 100 species



Michael Homburg in Namibia



Buprestidae - Jewel beetles

Larvae are wood-dweller



Buprestis I – the tool is forged



Buprestis I – the tool is forged



Buprestis I – the tool is forged



Buprestis I – the tool is forged



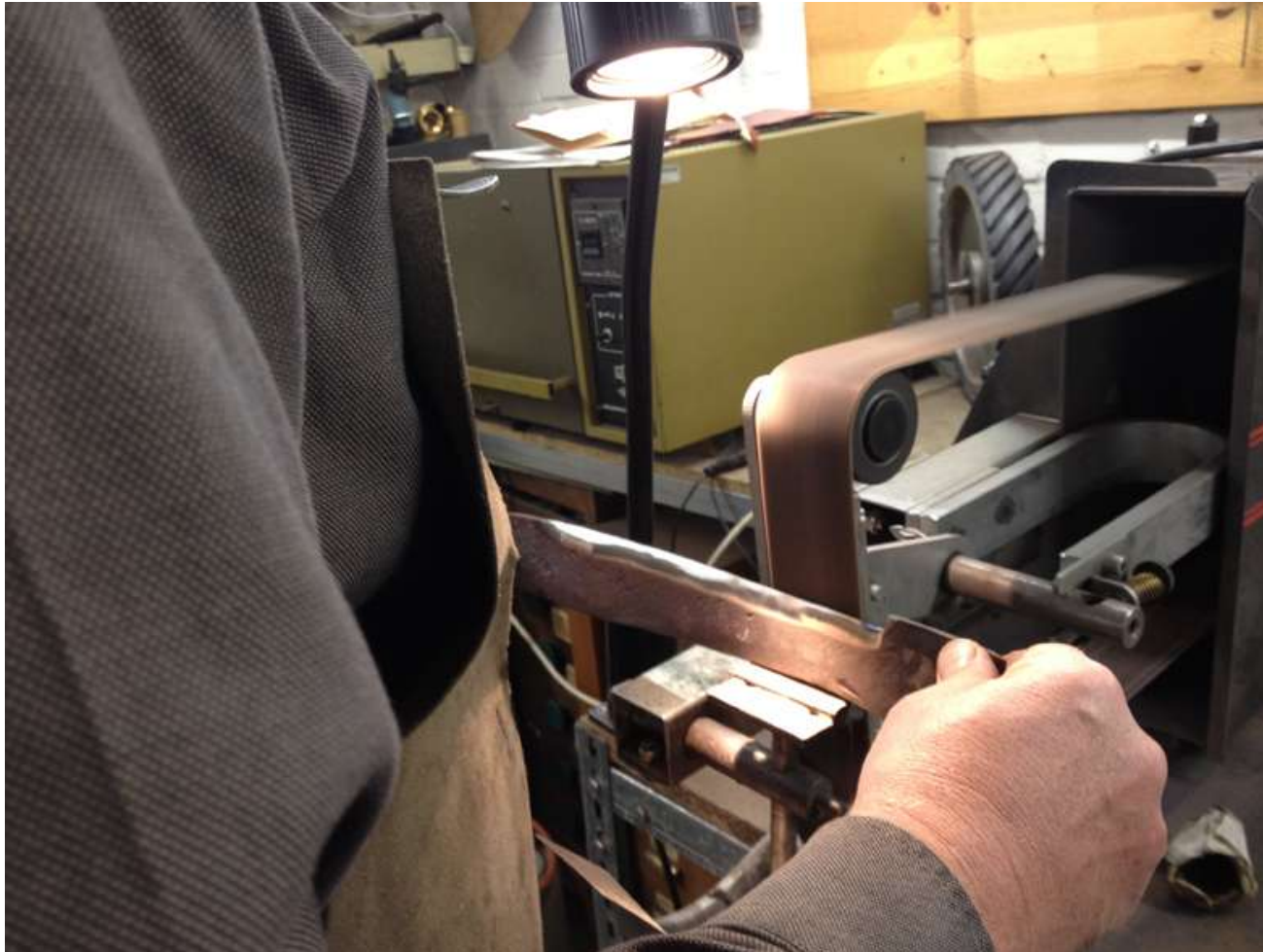
Buprestis I – the tool is forged



Buprestis I – the tool is ground



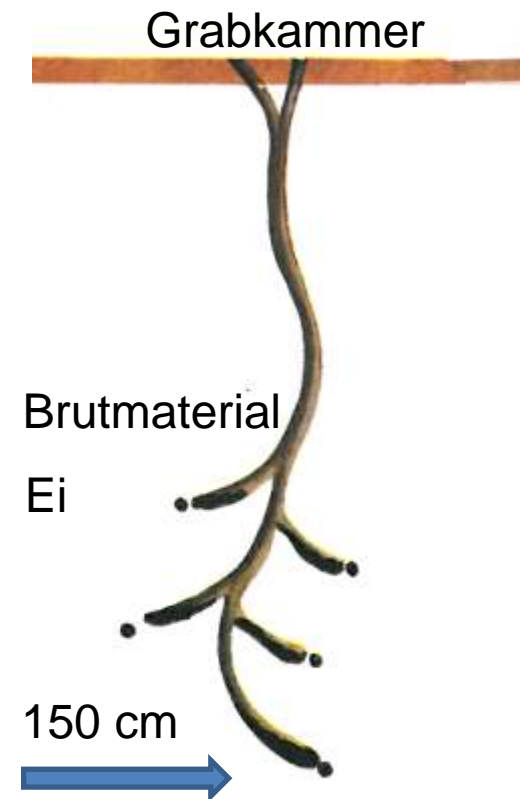
Buprestis I – the tool is ground



Geotrupes foderus



Dung beetle (*Typhaeus typhoeus*)



Geotrupes foderus

