

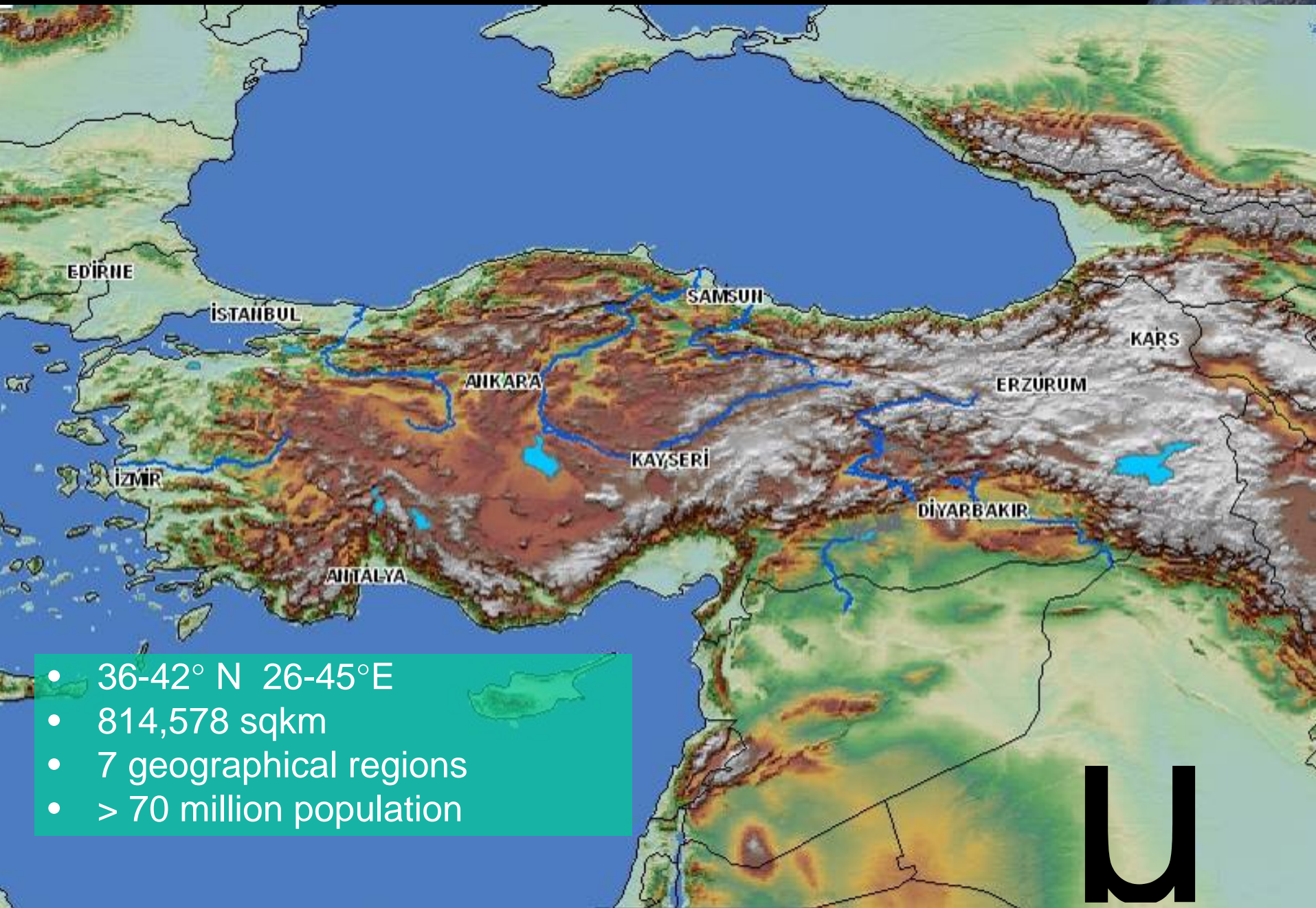
Ticks in


Turkey

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- 36-42° N 26-45° E
- 814,578 sqkm
- 7 geographical regions
- > 70 million population

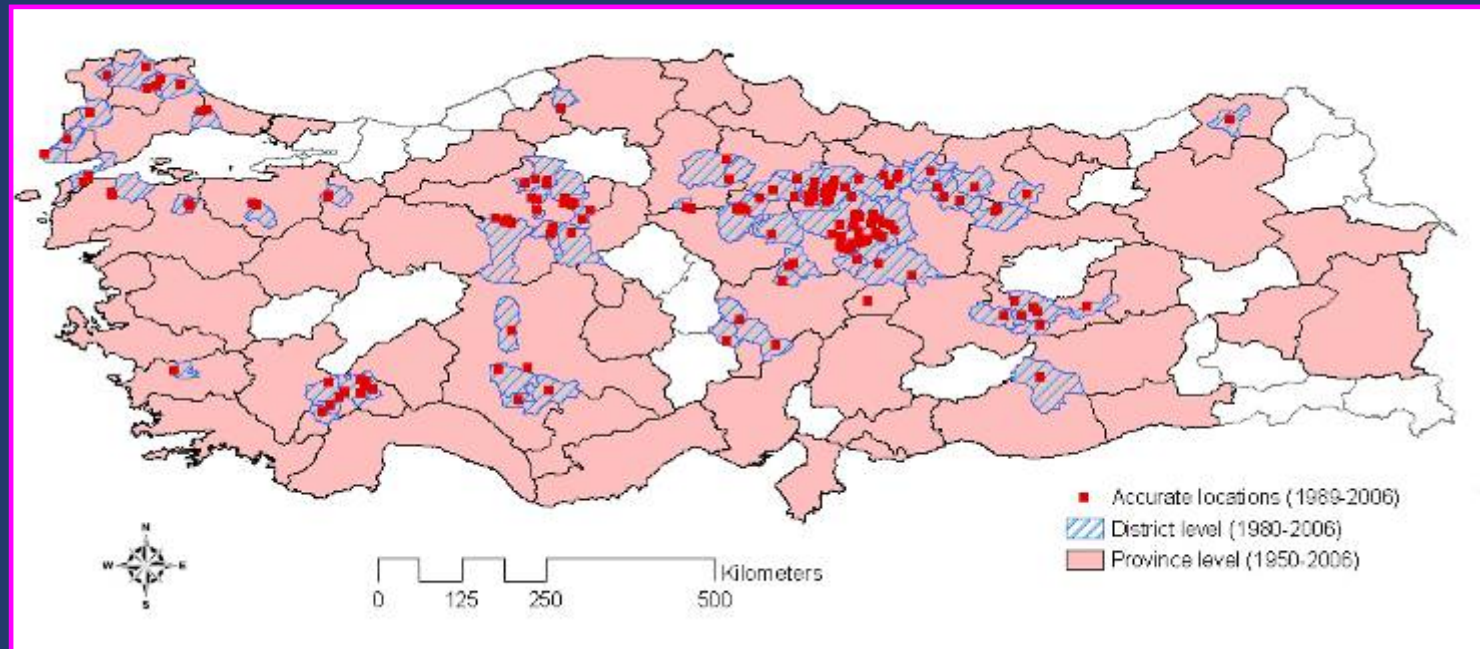
Ticks in Turkey



- 48 direct/indirect studies
- 32 tick species belonging to
 - 10 Ixodid genera
 - Rhipicephalus
 - Boophilus
 - Hyalomma
 - Haemaphysalis
 - Dermacentor
 - Ixodes
 - Amblyomma*
 - 3 Argasid genera
 - Argas
 - Ornithodoros
 - Otobius

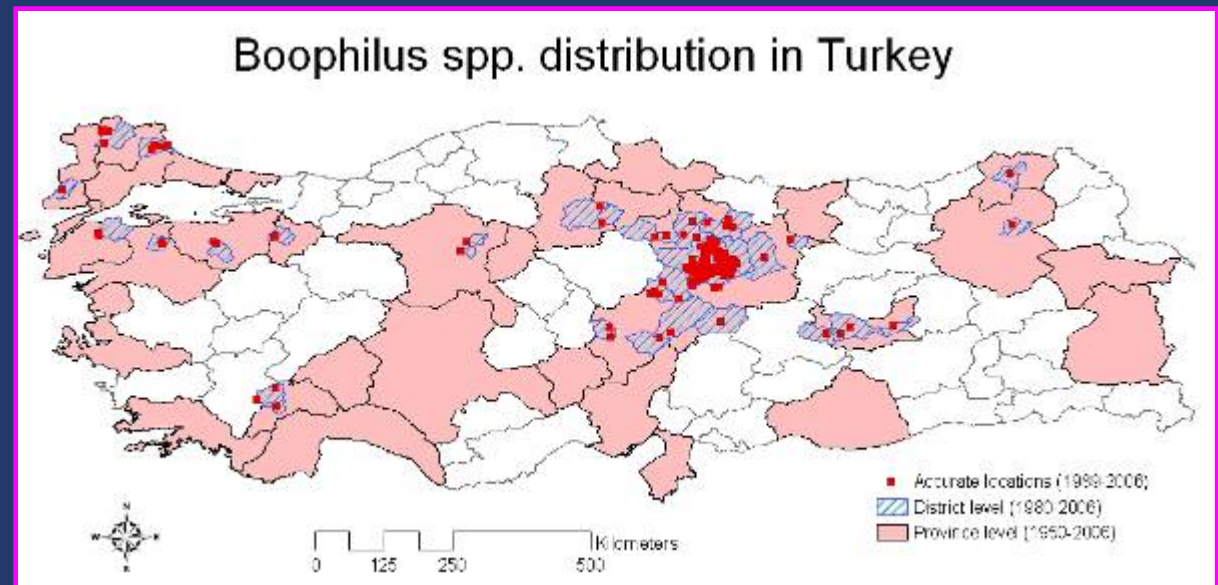
Rhipicephalus (most common ticks in Turkey)

- Common species
 - *R. bursa*
 - *R. sanguineus*
 - *R. turanicus*



Boophilus (widespread)

- Common species
 - *B. annulatus*
- Rare species
 - *B. kohlsi* (Individual reports)



Hyalomma

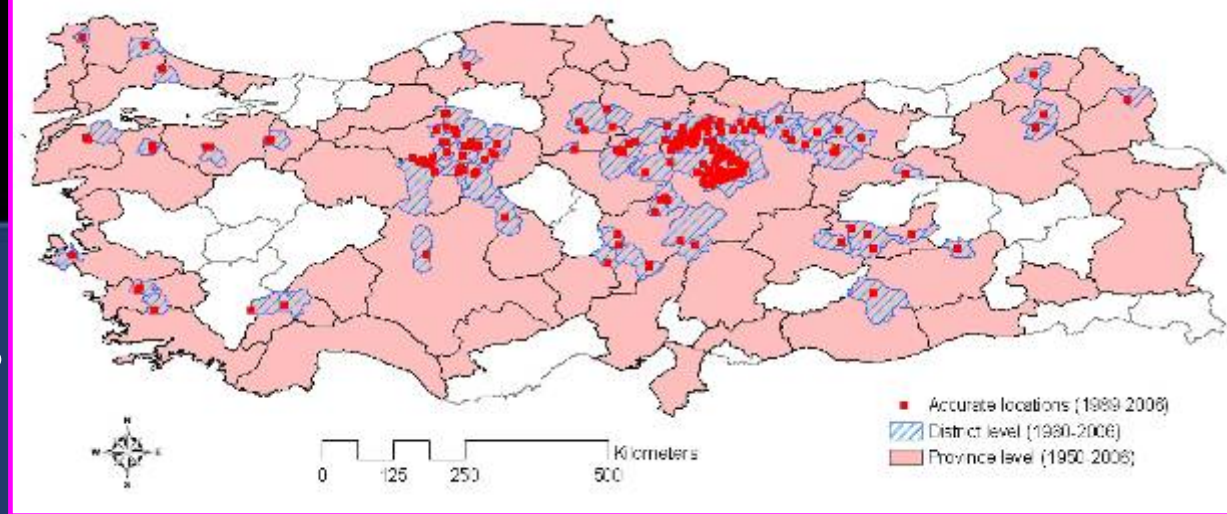
- Common species

- *H.a.anatolicum*
- *H.a.excavatum*
- *H. detritum*
- *H. marginatum*

- (*H. m. marginatum*, *H. m. turanicum*, *H. m. rufipes*)?

- Rare species

- *H.aegyptium* (common on tortoise)
- *H.dromedarii* (individual reports)
- *H. Impeltatum* (individual reports)



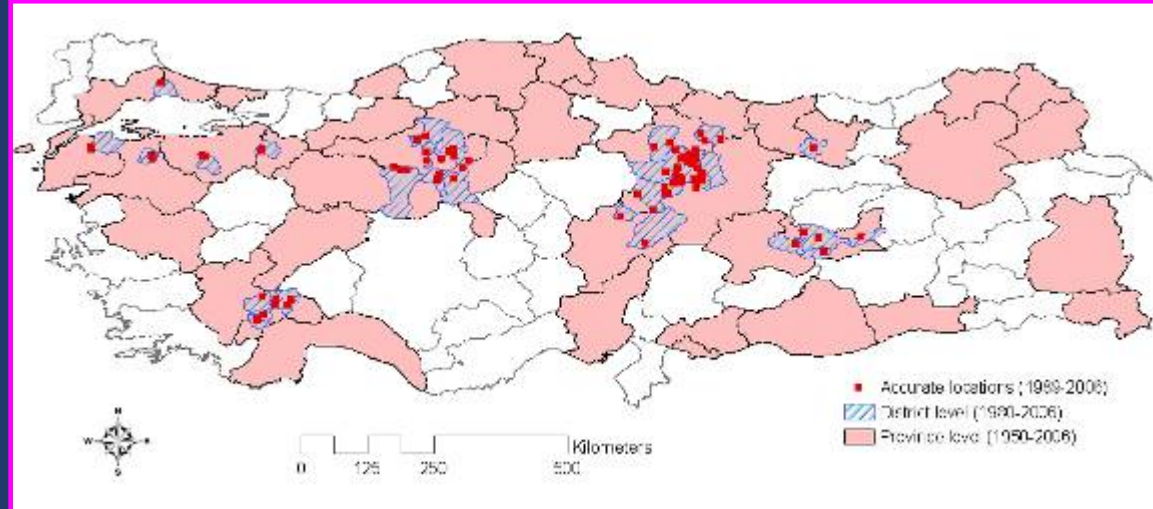
Haemaphysalis (winter ticks)

- Common species

- *Hae. parva*
- *Hae. sulcata*
- *Hae. punctata*

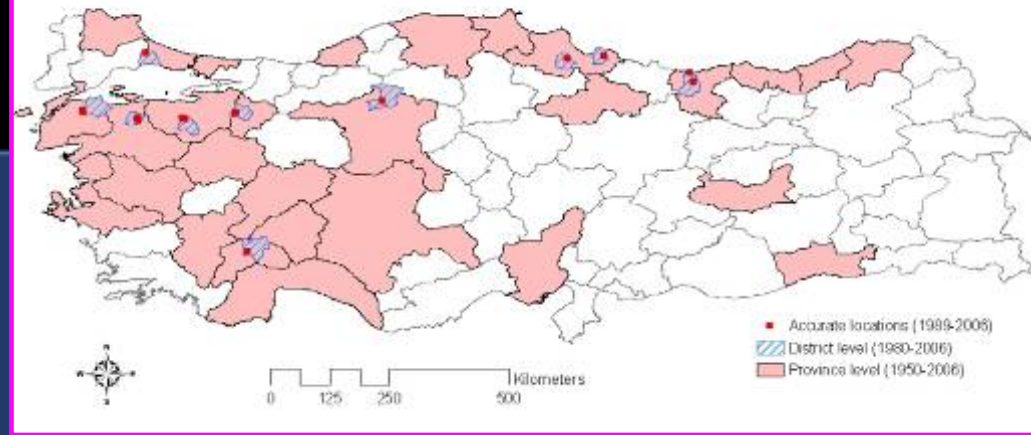
- Rare species

- *Hae. inermis*
- *Hae. numidiana*
- *Hae. concinna*



Ixodes

Ixodes spp. distribution in Turkey



- Common species

 - *I. ricinus*

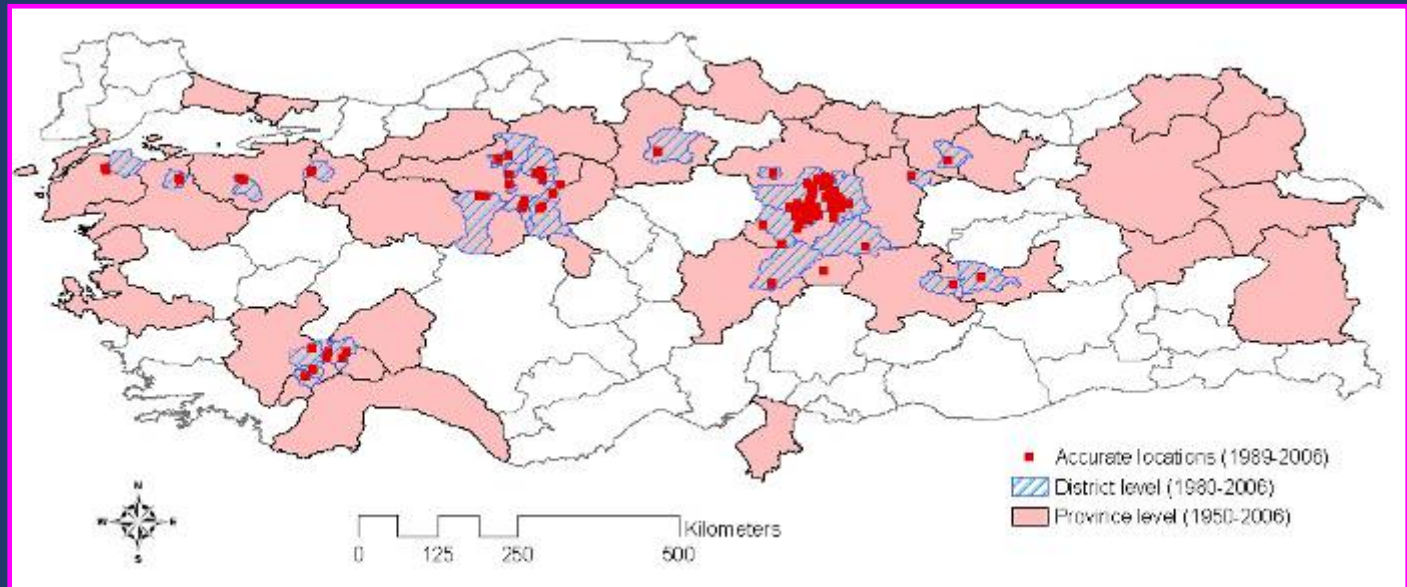
- Rare species

 - *I. laguri* (field mouse, squarrel)
 - *I. frontalis* (partridge)
 - *I. hexagonus* (hare, fox)
 - *I. vespertilionis* (bats)



Dermacentor

- Common species
 - *D. marginatus*
- Rare species
 - *D. niveus*



Argasidae

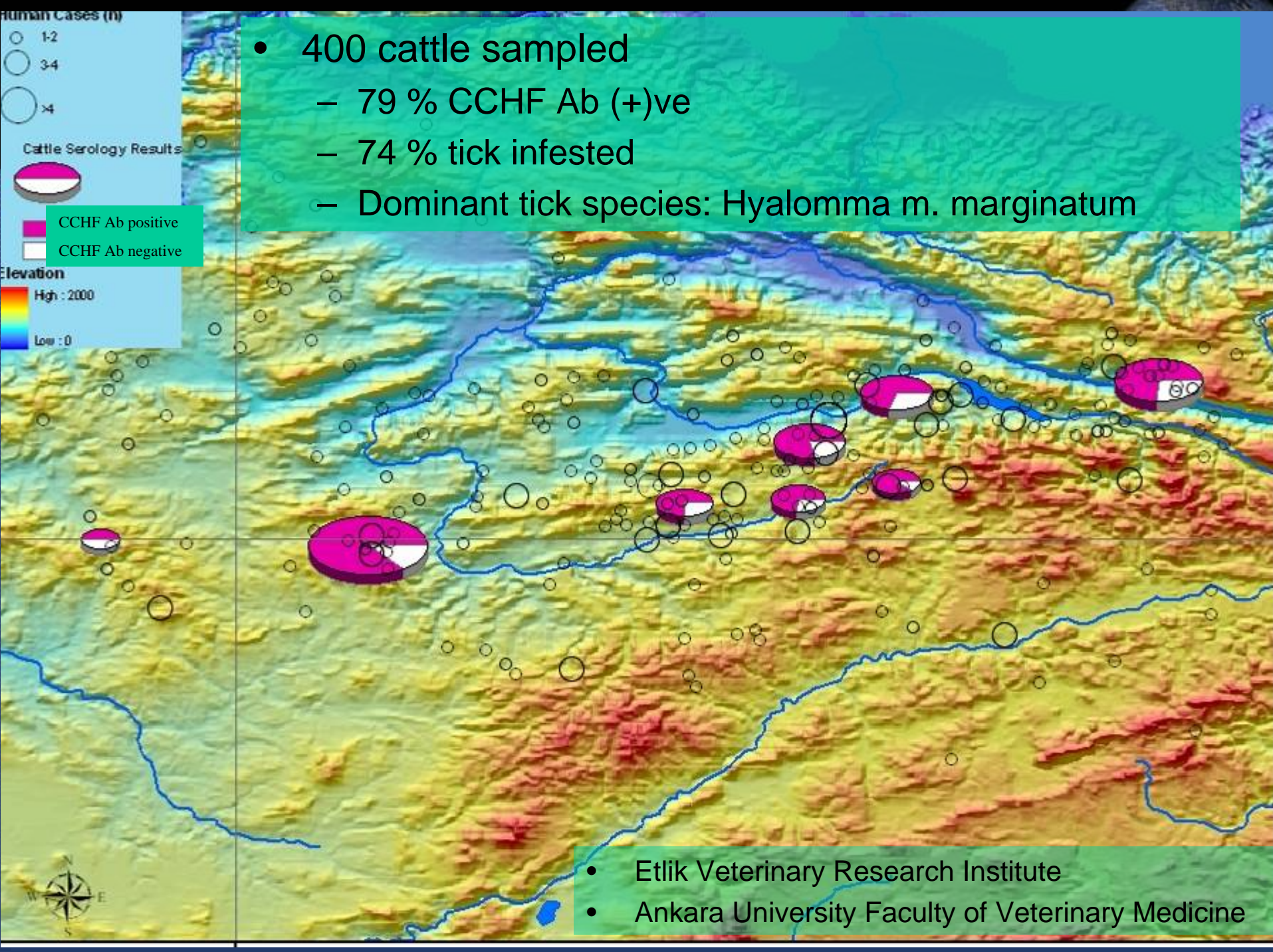
- Argas
 - *A.percicus* (common)
 - *A.reflexus* (Individual reports)
 - *A.vespertilionis* (Individual reports on baths)
- Ornithodoros
 - *O.lahorensis* (common)
 - *O.tholozani* (single report)
 - *O.coniceps* (single report)
- Otobius
 - *O. megnini* (single report)



Surveys in CCHF area

- Ministry of Health
- Ministry of Agriculture
 - Etlik Veterinary Research Institute
 - Pendik Veterinary Research Institute
- Turkish Network for Ticks & Tick-borne Diseases
 - Vet schools (Ankara, Aydin, Elazig)
 - Med school, Istanbul



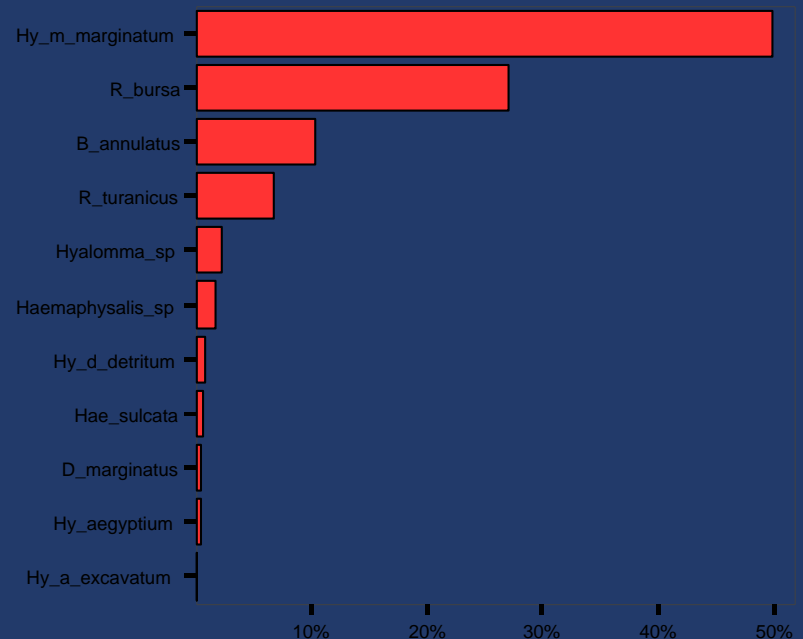


- 400 cattle sampled
 - 79 % CCHF Ab (+)ve
 - 74 % tick infested
 - Dominant tick species: *Hyalomma m. marginatum*

- Etlik Veterinary Research Institute
- Ankara University Faculty of Veterinary Medicine

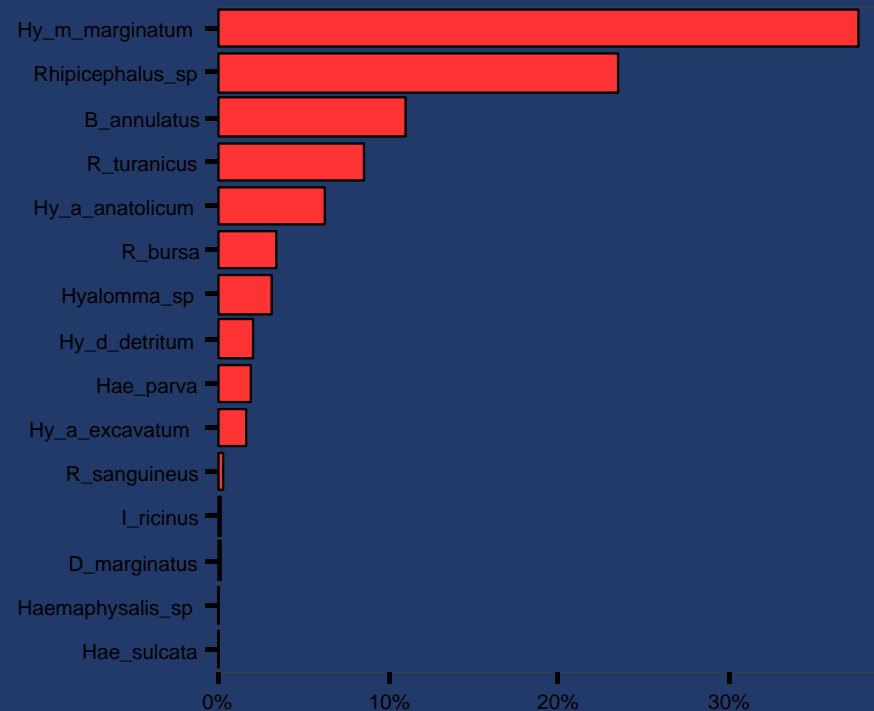
2005 tick survey

- 2 studies, 55 localities
- 49.9% *H.m.marginatum* (n=3124)
- 7 tick pools PCR positive (n= 69+90)
 - Ozdarendeli et al. (J.Clin.Microbiol. in press)
 - 1 *H.m.marginatum*
 - 2 *R.bursa*
 - 1 *B. annulatus*
 - Whitehouse et al.
 - 2 *H.m.marginatum*
 - 1 *.detritum*



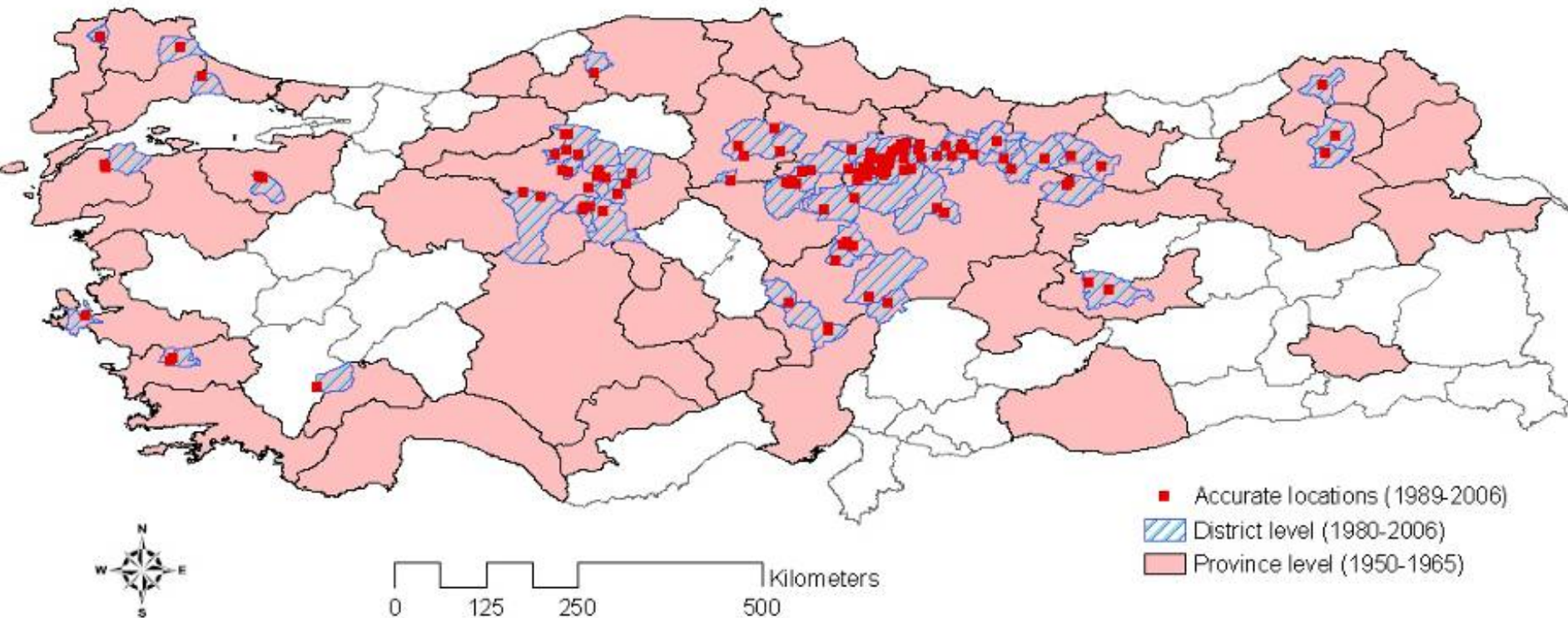
2006 tick survey

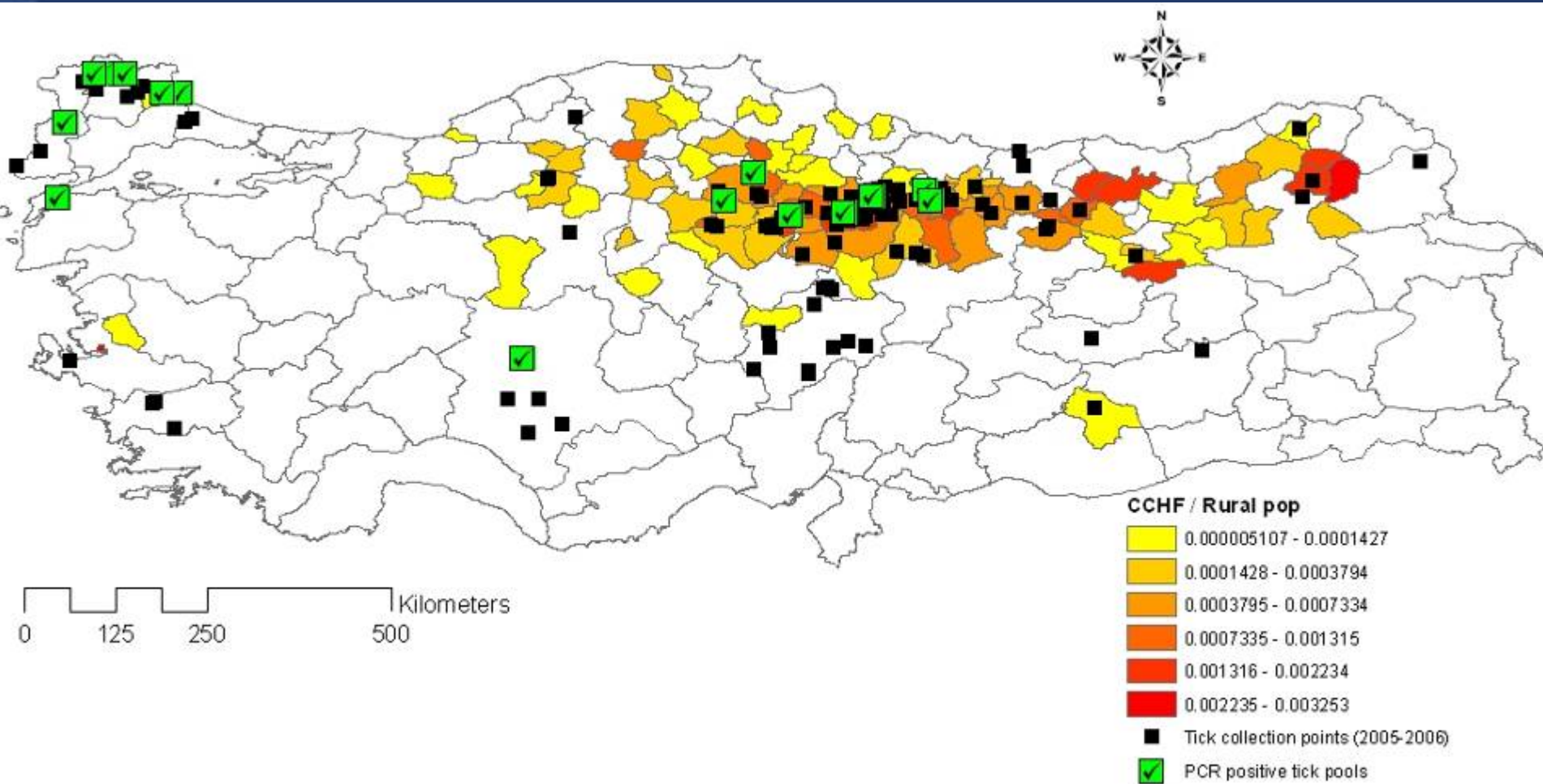
- 50 localities
- 37.5% *H.m.marginatum* (n=2720)
- 19 tick pools PCR positive (Gargili et al.)
 - 11 *Hy.m.marginatum*
 - 6 *B. annulatus*
 - 2 *R. bursa*





Hyalomma m. marginatum distribution in Turkey

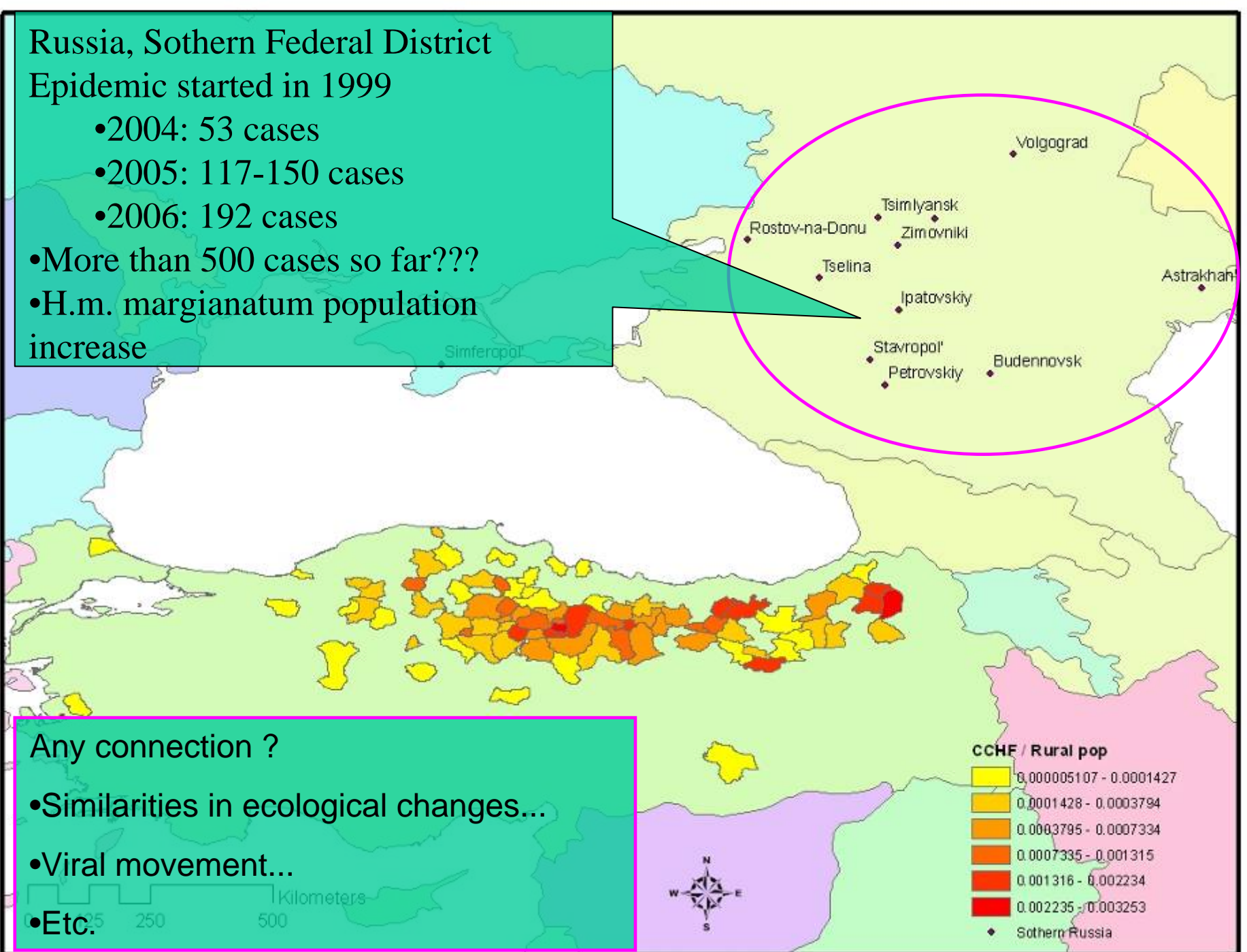




Russia, Sothern Federal District

Epidemic started in 1999

- 2004: 53 cases
- 2005: 117-150 cases
- 2006: 192 cases
- More than 500 cases so far???
- H.m. margianatum population increase



Any connection ?

- Similarities in ecological changes...
- Viral movement...
- Etc.

Factors...

- Unique geography
 - Valley systems, hilly surface
 - Oak bush coverage
- Enormous tick abundance
 - *H.m. marginatum* predominant
 - High tick bite rate in humans
- High wildlife density
 - Hare, wild boar and partridge



Tick data was derived from the works of below listed scientists. There is still more data to add...



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Turabi	GUNES	Cumhuriyet University, Faculty of Science, Sivas, Turkey
.	HOFFMANN	Hoffmann et al, 1971
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Thank you

